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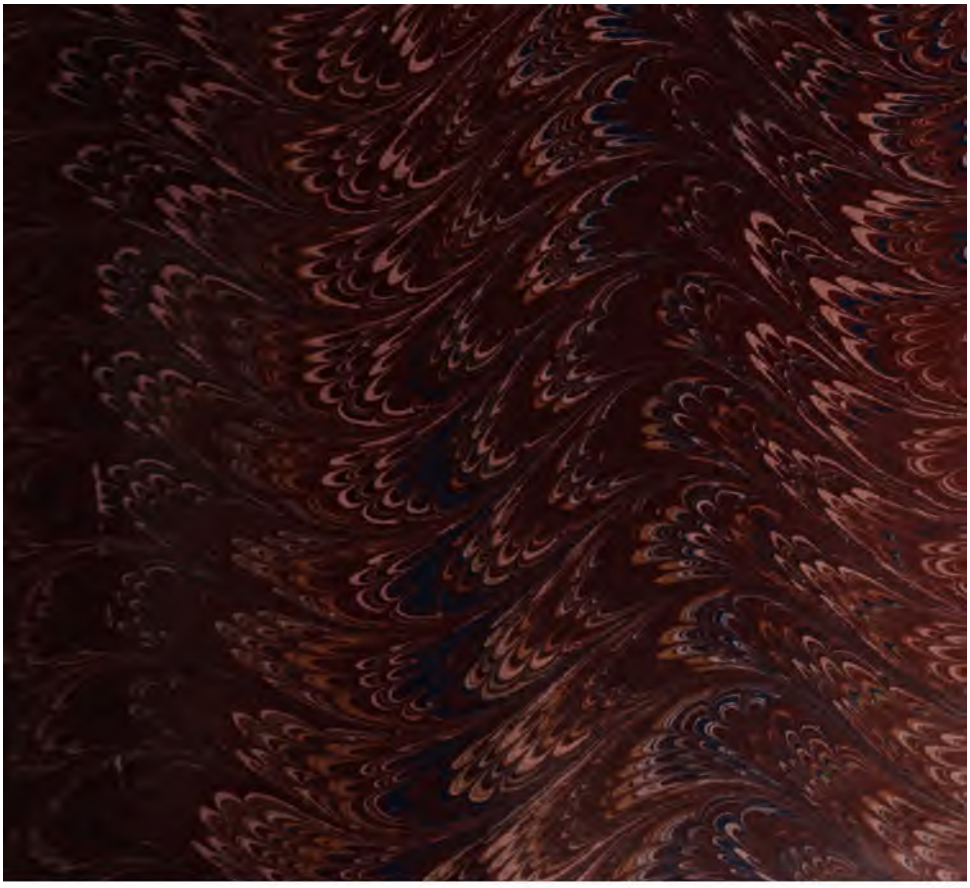

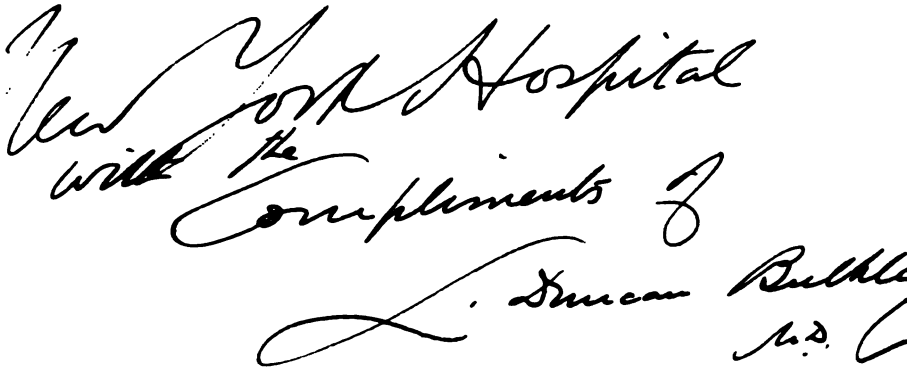
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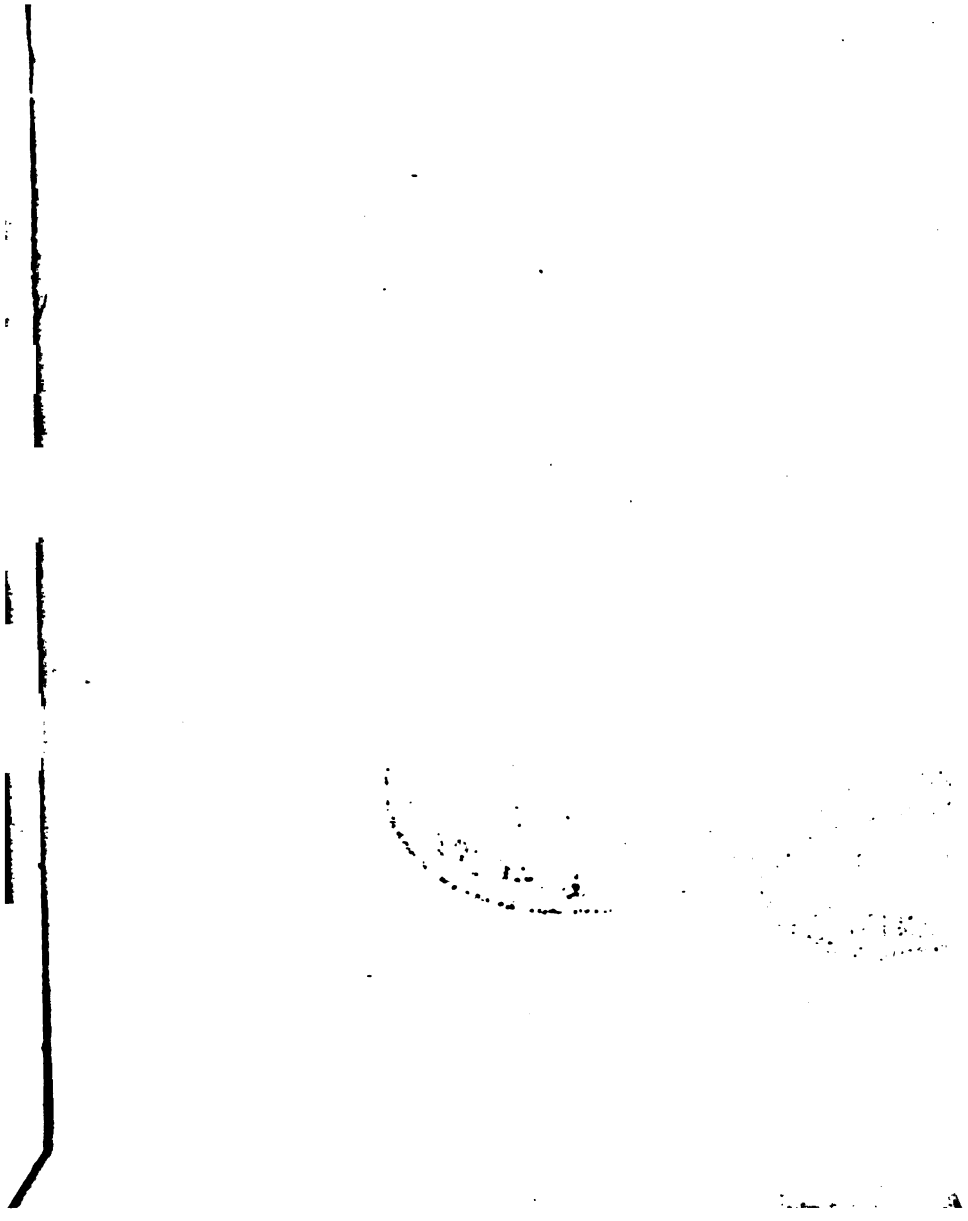

ON THE

NOMENCLATURE

AND

CLASSIFICATION

OF

DISEASES OF THE SKIN.

BY

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ON THE NOMENCLATURE

AND

CLASSIFICATION OF DISEASES OF THE SKIN.

WHILE it is granted that the discussion of the Nomenclature and Classification of Diseases of the Skin is of an importance far secondary to that in regard to their nature and cure, it must be yielded that a correct understanding of the principles of nomenclature and classification of any order of diseases is essential to a full understanding of the branch of medicine to which those diseases naturally belong. It has seemed best, therefore, to present to the readers of the Archives a scheme which, we believe, if utilized by those engaged in dermatology, will assist much in a comprehension of the subject and thus secondarily will aid them in managing this class of affections.

The classification which follows is not presented as a new one, indeed it possesses very few elements of real novelty, but it is an effort to harmonize the classifications now in practical use by many, and to present the entire subject in a concise, clear, and practical manner.

It is not presented as a classification which we should wish to adopt as a final one, but it is offered as a report of progress, representing, as I conceive, the present state of opinion of the greatest number of those who are, from clinical experience, best able to judge of the requirements and proprieties of a Nomenclature and Classification of Diseases of the Skin: this scheme is open to criticism, I am well aware, and I am also open to conviction in regard to any of its elements, and expect to make such changes in it in the future as advancing studies in dermatology will show to be advisable.

The present classification is based, as will be seen, very largely upon that of Hebra, the main principles of which have stood the test of nearly a quarter of a century of hard work and active criti-

cism, and which is to-day the accepted guide of many teachers i this and other countries. In preparing this nomenclature an classification, however, I have taken advantage of suggestions fro Neumann, Duhring, and others, including French and Englis writers, and, while the elements of the German arrangement o Hebra predominate greatly, his arrangement will be found to b greatly modified and simplified, so as to form really a new on which may be properly called an American classification, for use i studying and teaching dermatology in this country.* Such an a rangement as the following I consider to warrant far better the title c a *Clinical Classification* than the ones, such as that of Wilson, for whic this name has heretofore been claimed. The main general ele ments of novelty in the present scheme may now be briefly noticed matters relating to nomenclature and arrangement of separat diseases will be referred to later.

The class of "Parasitic Affections" I have placed first, as bein the first group which has reached the *ultima Thule* or final limit i classification, namely an etiological basis; this class has long bee accepted even in classifications claiming a histological basis.

The second class, that of "Glandular Affections," is made t embrace all those diseases already recognized as such, but sep rated by writers under many different names and heads; this clas rests on a pathological and clinical, rather than on an etiological c histological basis, but we believe it to be sound in theory and us ful in practice.

As the next best recognized and most clearly defined clinic class, with a beginning of histological support as far as relates t herpes zoster and trophic disturbances, we place the "Neuroses of the skin, a class which is continually being more and more clear defined, and which receives recognition in many classifications.

The remainder of the classes, as also most of the diseases unde them, correspond to those of Hebra, with certain exceptions. Thu his class of Anæmiæ, or anæmic affections, which I have never ol served clinically, if it exists at all, does not find a place here; als his two classes of benign new formations and malignant new fo mations are united in our ninth class; and his class of "U cera cutanea," which includes the primary venereal ulcers and var cose and other ulcers of the leg, is also omitted; thus the pre ent arrangement has but nine classes instead of twelve, as propose by Hebra.

With this much of introduction the classification is presente after which the principles of Nomenclature and their application i this scheme may be considered.

* This classification has been prepared primarily for the use of classes in De matology at Demilt Dispensary, and is printed on a folded card of four pages, little larger than a postal card, for convenience of pocket reference. The Edit will here state that the Digest Department of the "Archives" has been from t first divided up on a plan very similar to that indicated by this classification, ar also that in future, as far as any editorial work in this Journal is concerned, th nomenclature and classification will be adhered to; contributors will, of cour exercise their discretion in regard to terms, etc., employed.

LESIONS OF THE SKIN.

A. Primary Lesions.	B. Secondary Lesions.
1. Macula; spot, macule.	1. Squama; scale.
2. Papula; papule.	2. Crusta; crust.
3. Vesicula; vesicle.	3. Fissura; fissure.
4. Bulla; bleb.	4. Excoriatio; excoriation.
5. Pustula; pustule.	5. Ulcus; ulcer.
6. Pomphus; wheal.	6. Cicatrix; scar.
7. Tubercula; tubercle.	
8. Phyma; tumor.	

CLASSIFICATION.

OF

DISEASES OF THE SKIN.

Class I. **Morbi cutis parasitici.** Parasitic Affections.
" II. **Morbi glandularum cutis.** Glandular Affections.
" III. **Neuroses.** Neurotic Affections.
" IV. **Hyperæmiæ.** Hyperæmic Affections.
" V. **Exudationes.** Exudative Affections.
" VI. **Hæmorrhagiæ.** Hæmorrhagic Affections.
" VII. **Hypertrophiæ.** Hypertrophic Affections.
" VIII. **Atrophiæ.** Atrophic Affections.
" IX. **Neoplasmata.** New Formations.

Class I. Morbi cutis parasitici. Parasitic affections.

A. Vegetable.

1. Tinea trichophytina (*parasite—Trichophyton tonsurans*)
   - corporis (or circinata.)
   - capitis (or tonsurans.)
   - barbæ (or sycosis parasitica.)
   - cruris (or eczema marginatum.)
2. Tinea favosa (or favus) (*parasite—Achorion Schœnleinii.*)
3. Tinea versicolor (*parasite—Microsporon furfur.*)

B. Animal.

1. Phthiriasis
   - corporis
   - capitis
   - pubis

   (*parasite—Pediculus.*)
2. Scabies (*parasite—Acarus scabiei.*)

Class II. Morbi glandularum cutis. Glandular affections.

A. Diseases of the Sebaceous Glands.

I. Due to faulty secretion or excretion of Sebaceous matter.
- 1. Acne sebacea
  - oleosa
  - cerea
  - cornea

  (or seborrhœa.)
  - exsiccata (or xeroderma.)
- 2. Acne punctata
  - nigra (or comedo.)
  - albida (or milium.)
- 3. Acne molluscum.

II. Due to inflammation of sebaceous glands with surrounding tissue.
- 4. Acne simplex.
- 5. Acne indurata.
- 6. Acne rosacea.

B. Diseases of the Sweat Glands.
- I. As to quantity of secretion
  - 1. Hyperidrosis.
  - 2. Anidrosis.
- II. As to quality of secretion.
  - 3. Bromidrosis.
  - 4. Chromidrosis.
- III. With retention of secretion.
  - 5. Dysidrosis.
  - 6. Sudamina.

Class III. Neuroses. Neurotic affections.

1. Herpes zoster (or zona.)
2. Pruritus.
3. Dermatalgia.
4. Hyperæsthesia cutis.
5. Anæsthesia cutis.
6. Trophic disturbances.

Class IV. Hyperæmiæ. Hyperæmic affections.

A. Active.
- 1. Erythema simplex
  - idiopathicum.
  - traumaticum.
- 2. Roseola.

B. Passive.
- 1. Livedo mechanica.
- 2. Livedo calorica.

Class V. Exudationes. Exudative affections.

A. Induced by Infection or Contagion.
- 1. Morbilli.
- 2. Scarlatina.
- 3. Variola.
- 4. Varicella.
- 5. Vaccinia.
- 6. Pustula maligna.
- 7. Equinia (or glanders.)
- 8. Diphtheritis cutis.
- 9. Erysipelas.

B. Of Internal or of Local Origin.
- I. Erythematous.
  - 1. Erythema
    - multiforme.
    - nodosum.
  - 2. Urticaria.
- II. Papular.
  - 3. Lichen
    - simplex.
    - planus.
    - scrofulosus.
  - 4. Prurigo.
- III. Vesicular.
  - 5. Herpes.
    - febrilis.
    - iris.
    - progenitalis.
    - gestationis.
- IV. Bullous.
  - 6. Hydroa.
  - 7. Pemphigus
    - vulgaris.
    - foliaceus.
- V. Pustular.
  - 8. Sycosis.
  - 9. Impetigo.
  - 10. Impetigo contagiosa.
  - 11. Ecthyma.
- VI. Erythematous, papular, vesicular, pustular, etc.
  - 12. Eczema.
  - 13. Dermatitis
    - calorica.
    - venenata.
    - traumatica.
- VII. Squamous.
  - 14. Psoriasis.
  - 15. Pityriasis rubra.
- VIII. Phlegmonous
  - 16. Furunculus.
  - 17. Anthrax.

Class VI. Hæmorrhagiæ. Hæmorrhagic affections.

1. Purpura. { simplex. / papulosa. / rheumatica (or peliosis rheumatica.) / hæmorrhagica.
2. Hæmatidrosis (or bloody sweat.)
3. Scorbutus.

Class VII. Hypertrophiæ. Hypertrophic affections.

A. Of Pigment. { 1. Lentigo. / 2. Chloasma. / 3. Nævus pigmentosus. / 4. Morbus Addisonii.

B. Of Epidermis and Papillæ. { 1. Lichen pilaris. / 2. Ichthyosis. / 3. Cornu cutaneum / 4. Clavus. / 5. Callositas (or tylosis.) / 6. Verruca. { vulgaris. / senilis. / acuminata.

C. Of Connective Tissue. { 1. Scleroderma. / 2. Scleremia neonatorum. / 3. Morphœa. / 4. Elephantiasis (Arabum.) / 5. Dermatolysis.

D. Of Hair. 1. Hirsuties. 2. Nævus pilosus.

E. Of Nail. 1. Onychia. 2. Onychauxis.

Class VIII. Atrophiæ. Atrophic affections

A. Of Pigment. { 1. Albinismus. / 2. Leucoderma (or vitiligo.) / 3. Canities.

B. Of Corium. 1. Atrophia cutis. 2. Atrophia senilis.

C. Of Hair. { 1. Alopecia. / 2. Alopecia areata. / 3. Atrophia pilorum (or fragilitas crinium.)

D. Of Nail. Onychatrophia.

Class IX. Neoplasmata. New formations.

I. Benign New Formations.

A. Of Connective Tissue. { 1. Keloid. / 2. Molluscum fibrosum (or fibroma.) / 3. Xanthoma (xanthelasma or vitiligoidea.)

B. Cellular. { 1. Lupus { vulgaris. / erythematosus. / 2. Scrofuloderma. / 3. Rhinoscleroma. / 4. Syphiloderma.

C. Of Blood Vessels. { 1. Nævus vasculosus. / 2. Telangiectasis.

D. Of Lymphatics. { 1. Lymphangioma cutis. / 2. Lymphadenoma cutis.

E. Of Nerves. Neuroma cutis.

II. Malignant New Formations.

1. Lepra. { tuberculosa / maculosa / anæsthetica } (or elephantiasis Græcorum.)

2. Carcinoma. { epitheliomatosum (or epithelioma.) / papillomatosum (or papilloma.)

3 Sarcoma. { idiopathicum. / pigmentosum.

In adopting a Nomenclature I have (with one exception to be mentioned later) followed a plan which has been more or less recognized by several writers, of selecting, as far as possible, words derived from the Greek for the primary name of the disease, while secondary terms and expletives are given always in Latin, a plan which has been heretofore followed in making the report of my Dispensary work during the past three years. Where it was thought that the term given was not sufficiently clear, synonyms have been introduced.

Under parasitic diseases, the affection tinea trichophytina or ringworm in its various forms, has been designated by names signifying the various portions of the body affected; thus, tinea circinata, the old herpes circinatus, or ringworm of the body, here has the designation "*tinea corporis*," indicating its location; *tinea capitis* (*trichophytina*), replaces the old herpes tonsurans, or tinea tondens, etc.; *tinea barbæ* is the more proper designation for the parasitic sycosis, thus leaving the name sycosis for the ordinary non-parasitic peri-follicular disease; while eczema marginatum, the parasitic affection about the thighs and genitals, so long misnamed, here takes the proper name *tinea cruris* (*trichophytina*), tinea genito-cruralis would perhaps be more accurate, but the shorter term is preferred. The other names in this group do not differ from those ordinarily accepted; alopecia areata is excluded from among parasiic diseases.

The arrangement of the diseases of the sebaceous glands, and the names employed, correspond more to the French teachings, and are the same as those which I suggested four years ago, after a careful clinical study of acne and its accompaniments,* and continued observation and study has still further demonstrated to me the propriety of classing all of these affections together under the generic term acne.

Some objections might be made to placing herpes zoster among the "Neuroses," Class III.; it has never thus been located in the classifications of others, but its true nervous origin is now so incontestably demonstrated that if we wish to really base our classification on pathological facts this disease should form the centre around which we may group others whose clinical features are wholly neurotic, but whose nerve origin is at present less clearly demonstrated. In regard to the "trophic disturbances" placed in this class, as far as I am aware, these have never entered any previous classification of diseases of the skin, and it would be difficult to place them anywhere but in the present location, for they may present many if not all the phenomena exhibited in other cutaneous maladies, erythema, vesiculation, atrophy, etc. It would, perhaps, be better to give a Latin equivalent for the name, but the subject of "trophic disturbances," or the changes in tissues resulting from nerve injuries, is so recent that it does not appear best to burden it with any new elements. The other diseases in this class are those commonly placed there by those who have written on the subject.

* The American Practitioner, December, 1872.

In Class IV., "Hyperæmiæ," the names and their arrangement are those of Hebra and Neumann, and are familiar to all.

The fifth class, "Exudative Affections," includes a large share of the more commonly met with diseases of the skin, and is at the same time the most interesting and yet the least satisfactory class; its basis is pathological rather than histological, while its two main subdivisions are purely clinical. Most of the subdivisions and the diseases under them will be readily accepted, but some differences of opinion may arise in regard to individual elements. Many recent writers have excluded the lichen simplex of older authorities, classing this papular eruption as eczema; this I do not accede to and still retain lichen simplex, acute and chronic, as a papular disease distinct from papular eczema, and also quite distinct from the other varieties here given, lichen planus and scrofulosus, as also different from the lichen pilaris, found among the epidermal hypertrophies.

It will be seen that both prurigo and pruritus enter this classification; the difference between the diseases represented by these names has not been recognized by the profession at large in this country, and I would call attention to the fact that by prurigo is understood the disease to which Hebra, and others following him, have firmly attached this name, which is a papular disease, not associated with lice nor related to pruritus, which appears under the head of neurotic affections.

Herpes, in the present scheme is made to include several forms which have been recognized by writers under this name, except herpes zoster, which, as before mentioned, is reckoned among the neuroses; also many cases of irregular bullous disease, formerly classed as herpes phlyctenodes or as pemphigus, are here assigned a separate place with the provisionary designation of hydroa. Eczema and dermatitis are here brought together, because their lesions ofttimes closely resemble each other, and because this very proximity of relation will suggest the necessity of recognizing the purely local affair dermatitis and separating it clinically from the constitutional disease eczema.

The rheumatic form of purpura (Class VI.) has been called by some peliosis rheumatica; it is desirable that the name of a disease shall as far as possible indicate its true nature, and it is here given its proper title, purpura rheumatica, inasmuch as it is undoubtedly a form of purpura occurring in rheumatic subjects. Hæmatidrosis, or bloody sweat, and scorbutus have not generally been classed among the cutaneous hæmorrhages, the former, however, is plainly but an effusion of blood from the capillaries of the sweat glands, and the latter, scorbutus, should be recognized and described among hæmorrhages in the skin, because its cutaneous manifestations are frequent, and are very liable to be mistaken for purpura.

In Class VII., under connective-tissue hypertrophies, I have included both scleroderma and scleremia neonatorum as separate diseases, as they are generally recognized and described as such, although some confusion exists yet in reference to their true points of similarity and difference. Morphœa is classed by Duhring among

the atrophies of the skin, he stating that "the more important changes which take place are manifestly of an atrophic nature;" Fox places it among the hypertrophies. By morphœa I understand the same disease which Duhring has so well described, but I take issue with him in regard to the process of disease, which I regard to be an hypertrophy rather than an atrophy, the hardening resembles that of scleroderma in some of its features, but distinct, differences exist, and the final result in morphœa is less of an atrophic process than is that of scleroderma, as I have elsewhere shown,* and yet scleroderma is recognized by all as an hypertrophic disease; morphœa appears to be rather a lardaceous infiltration of the connective tissue; researches are needed in order to determine its exact place in classification, for the present it must remain here.

The term leucoderma (Class VIII.) I have preferred to other terms applied to this affection, inasmuch as it corresponds to certain other names which have taken a firm hold on dermatological nomenclature, as syphiloderma, scrofuloderma, xeroderma; vitiligo signifies but little etymologically, while albinismus partialis, quite as much as leucoderma, fails to recognize the darkened borders of the white patches.

In the ninth class, "New Formations," I have followed the Germans as closely as possible, combining, as mentioned before, the two classes of Hebra, benign and malignant new formations in one class. Epithelioma is made here to include rodent ulcer; and pigment sarcoma represents many cases of so-called melanosis.

As before mentioned this nomenclature and classification is not all that we could desire, it is based on several modes of grouping diseases, etiological, clinical, pathological, and histological (the latter especially in the ninth class), but I shall not attempt here to defend it, because its different elements have received the sanction of those well versed in dermatology, and, were a complete revolution attempted, much confusion would necessarily result and the student and those little acquainted with the subject would be thereby perplexed instead of assisted. It is sincerely hoped that those writing and reporting cases in this country will endeavor to use a uniform system of nomenclature and classification, and, after much candid study of the matter, and a due consideration of dermatological literature, the present scheme is presented as most likely, in my opinion, to harmonize and reduce to a clear and practical basis the, to many, obscure and difficult matter of the Nomenclature and Classification of Diseases of the Skin.

* Archives of Dermatology, Vol. III., No. 2, January, 1877, page 100.

ON THE

NOMENCLATURE AND CLASSIFICATION

OF

DISEASES OF THE SKIN:

WITH REMARKS

UPON THAT RECENTLY ADOPTED BY THE

AMERICAN DERMATOLOGICAL ASSOCIATION.

By L. DUNCAN BULKLEY, A.M., M.D.,

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[Reprinted from Archives of Dermatology, April, 1879.]

ON THE NOMENCLATURE AND CLASSIFICATION OF DISEASES OF THE SKIN: WITH REMARKS UPON THAT RECENTLY ADOPTED BY THE AMERICAN DERMATOLOGICAL ASSOCIATION.

TWO years ago the writer published in this Journal* a nomenclature and classification of diseases of the skin which had been used by him in teaching, believing that it presented the subject in a more concise, clear, and practical manner than had been previously accomplished. As it rested upon the basis of modern developments in dermatology, and agreed in the main with that accepted by many modern workers and writers, it was thought that this general plan was likely to be accepted and used, and that it possibly would form the basis of an universal scheme whereby the dermatology of various countries would unite in a common understanding.†

To this end no innovations were attempted, but, to quote what was said in the former article, "The present classification is based, as will be seen, largely upon that of Hebra, the main principles of which have stood the test of nearly a quarter of a century of hard work and active criticism, and which is to-day the accepted guide of many teachers in this and other countries. In preparing this nomenclature and classification, however, I have taken advantage of suggestions from Neumann, Duhring, and others, including French and English writers; and while the elements of the German arrangement of Hebra predominate largely, his arrangement will be found to be greatly modified and simplified, so as to form really a new one, which may properly be called an American classification, for use in studying and teaching dermatology in this country. It is not presented as a classification which we should wish to adopt as a final one, but it is offered as a report of progress, representing, as I conceive, the present state of opinion of the greatest number of those

* Archives of Dermatology, Vol. III. p. 200, April, 1877.

† It is no little pleasure and satisfaction to find that in the recent clinical treatise on skin diseases, by Dr. Engelsted, physician-in-chief of the general hospital in Copenhagen, and well known as a writer on skin and venereal diseases, the classification and nomenclature here presented has been adopted, the author mentioning the fact in the preface, with the statement that he regards it as the clearest and best of the systems with which he is acquainted. This is a step towards the introduction of an universal nosological basis of dermatology.

who are, from clinical experience, best able to judge of the requirements and proprieties of a nomenclature and classification of diseases of the skin. This scheme is open to criticism, I am well aware, and I am also open to conviction in regard to any of its elements, and expect to make such changes in it in the future as advancing studies in dermatology will show to be advisable."

This scheme is now presented again, with the revisions which have seemed proper, after two years' further occupation in cutaneous medicine, and after much study and thought on the subject of its nosology, and after almost daily employment of this nomenclature and classification in teaching; attention will be called later to the points in which it has appeared best to make alterations or additions, which are indeed but few.

LESIONS OF THE SKIN.

A. PRIMARY LESIONS.	B. SECONDARY LESIONS.
1. Macula; spot, macule.	1. Squama; scale.
2. Papula; papule.	2. Crusta; crust.
3. Vesicula; vesicle.	3. Fissura; fissure.
4. Bulla; bleb.	4. Excoriatio; excoriation.
5. Pustula; pustule.	5. Ulcus; ulcer.
6. Pomphus; wheal.	6. Cicatrix; scar.
7. Tuberculum; tubercle.	
8. Phyma; tumor.	

CLASSIFICATION
OF
DISEASES OF THE SKIN.

CLASS I. **Morbi cutis parasitici.** Parasitic Affections.
" II. **Morbi glandularum cutis.** Glandular Affections.
" III. **Neuroses.** Neurotic Affections.
" IV. **Hyperæmiæ.** Hyperæmic Affections.
" V. **Exsudationes.** Exudative or Inflammatory Affections.
" VI. **Hæmorrhagiæ.** Hæmorrhagic Affections.
" VII. **Hypertrophiæ.** Hypertrophic Affections.
" VIII. **Atrophiæ.** Atrophic Affections.
" IX. **Neoplasmata.** New Formations.

Class I. Morbi cutis parasitici. Parasitic Affections.

A. VEGETABLE.
- 1. Tinea trichophytina (or trichophytosis) (*parasite—Trichophyton tonsurans*)
  - corporis (or tinea circinata).
  - capitis (or tinea tonsurans).
  - barbæ (or sycosis parasitica).
  - cruris (or eczema marginatum).
- 2. Tinea favosa (or favus) (*parasite—Achorion Schœnleinii*).
- 3. Tinea versicolor (or chromophytosis) (*parasite—Microsporon furfur*).

B. ANIMAL.
- 1. Phthiriasis (or pediculosis) { corporis / capitis / pubis } (*parasite—Pediculus*).
- 2. Scabies (*parasite—Acarus scabiei*).

Class II. Morbi glandularum cutis. Glandular Affections.

A. DISEASES OF THE SEBACEOUS GLANDS.
- I. Due to faulty secretion or excretion of sebaceous matter.
  - 1. Acne sebacea { oleosa / cerea / cornea } (or seborrhœa). / exsiccata (or xeroderma).
  - 2. Acne punctata { nigra (or comedo). / albida (or milium).
  - 3. Acne molluscum (or molluscum sebaceum).
- II. Due to inflammation of sebaceous glands with surrounding tissue.
  - 4. Acne simplex (or vulgaris).
  - 5. Acne indurata.
  - 6. Acne rosacea.

B. DISEASES OF THE SWEAT GLANDS.
- I. As to quantity of secretion.
  - 1. Hyperidrosis.
  - 2. Anidrosis.
- II. As to quality of secretion.
  - 3. Bromidrosis.
  - 4. Chromidrosis.
- III. With retention of secretion.
  - 5. Dysidrosis.
  - 6. Sudamina.

Class III. Neuroses. Neurotic Affections.

1. Zoster (herpes zoster or zona).
2. Pruritus.
3. Dermatalgia.
4. Hyperæsthesia cutis.
5. Anæsthesia cutis.
6. Dystrophia cutis (or trophic disturbances).

Class IV. Hyperæmiæ. Hyperæmic Affections.

A. ACTIVE.
- 1. Erythema simplex { idiopathicum. / traumaticum.
- 2. Roseola.

B. PASSIVE.
- 1. Livedo mechanica.
- 2. Livedo calorica.

Class V. Exsudationes. Exudative or Inflammatory Affections.

A. INDUCED BY INFECTION OR CONTAGION.
1. Rubeola (or measles).
2. Rubella (or rötheln).
3. Scarlatina.
4. Variola.
5. Varicella.
6. Vaccinia.
7. Pustula maligna.
8. Equinia (or glanders).
9. Diphtheritis cutis.
10. Erysipelas.

B. Of Internal or Local Origin.

- I. Erythematous.
  - 1. Erythema
    - multiforme.
    - nodosum.
  - 2. Urticaria.
- II. Papular.
  - 3. Lichen
    - simplex.
    - planus.
    - ruber.
    - scrofulosus.
  - 4. Prurigo.
- III. Vesicular.
  - 5. Herpes
    - febrilis.
    - iris.
    - progenitalis.
    - gestationis.
- IV. Bullous.
  - 6. Hydroa.
  - 7. Pemphigus
    - vulgaris.
    - foliaceus.
  - 8. Pompholix (or cheiro-pompholix).
- V. Pustular.
  - 9. Sycosis.
  - 10. Impetigo.
  - 11. Impetigo contagiosa.
  - 12. Ecthyma.
- VI. Erythematous, papular, vesicular, pustular, etc.
  - 13. Eczema.
  - 14. Dermatitis
    - calorica.
    - venenata.
    - traumatica.
- VII. Squamous.
  - 15. Dermatitis exfoliativa (or pityriasis rubra).
  - 16. Psoriasis.
  - 17. Pityriasis capitis.
- VIII. Phlegmonous.
  - 18. Furunculus (furunculosis).
  - 19. Anthrax.
- IX. Ulcerative.
  - 20. Ulcus
    - simplex.
    - venereum.
  - 21. Onychia.

Class VI. Hæmorrhagiæ. Hæmorrhagic Affections.

1. Purpura.
   - simplex.
   - papulosa.
   - rheumatica (or peliosis rheumatica).
   - hæmorrhagica.
2. Hæmatidrosis (or bloody sweat).
3. Scorbutus.

Class VII. Hypertrophiæ. Hypertrophic Affections.

A. Of Pigment.
1. Lentigo.
2. Chloasma.
3. Melanoderma.
4. Nævus pigmentosus.
5. Morbus Addisonii.

B. Of Epidermis and Papillæ.
1. Keratosis pilaris (or lichen pilaris).
2. Ichthyosis.
3. Cornu cutaneum.
4. Clavus.
5. Tylosis (or callositas).
6. Verruca
   - vulgaris.
   - senilis.
   - acuminata.
   - necrogenica.

C. Of Connective Tissue.
1. Scleroderma.
2. Sclerema neonatorum.
3. Morphœa.
4. Elephantiasis (Arabum).
5. Dermatolysis.
6. Frambœsia (or yaws).

D. Of Hair.
1. Hirsuties.
2. Nævus pilosus.

E. Of Nail.
1. Onychogryphosis.
2. Onychauxis.

Class VIII. Atrophiæ. Atrophic Affections.

- A. Of Pigment.
  - 1. Albinismus.
  - 2. Leucoderma (or vitiligo).
  - 3. Canities.
- B. Of Corium.
  - 1. Atropia cutis
    - propria.
    - linearis (or striæ atrophicæ).
    - maculosa (or maculæ atrophicæ).
  - 2. Atrophia senilis.
- C. Of Hair.
  - 1. Alopecia.
  - 2. Alopecia areata.
  - 3. Trichorexis nodosa (atrophia pilorum propria, or fragilitas crinium).
- D. Of Nail. Onychatrophia.

Class IX. Neoplasmata. New Formations.

I. Benign New Formations.

- A. Of Connective Tissue.
  - 1. Keloid.
  - 2. Fibroma (or molluscum fibrosum).
  - 3. Xanthoma (xanthelasma or vitiligoidea).
- B. Of Granulation Tissue.
  - 1. Lupus
    - vulgaris.
    - erythematosus.
  - 2. Rhinoscleroma.
  - 3. Scrofuloderma.
  - 4. Syphiloderma.
- C. Of Blood-Vessels.
  - 1. Nævus vasculosus.
  - 2. Angioma (or telangiectasis).
- D. Of Lymphatics.
  - 1. Lymphangioma cutis.
  - 2. Lymphadenoma cutis.
- E. Of Nerves. Neuroma cutis.

II. Malignant New Formations.

1. Lepra
   - tuberosa
   - maculosa

   (or elephantiasis Græcorum).
2. Carcinoma
   - epitheliomatosum (epithelioma and rodent ulcer).
   - papillomatosum (or papilloma).
3. Sarcoma
   - idiopathicum.
   - pigmentosum (or melanosis).

But few points of difference exist between this scheme and that presented two years ago, and in no essential elements has it seemed necessary to alter either the classification or the nomenclature. Further study has demonstrated the advisability of adhering with absoluteness to the use of classical names, taken, as far as possible, from the Greek for primary terms, while for secondary names and expletives Latin is used. I am convinced of the very great desirability of writers in all countries endeavoring to follow this method, and of avoiding absolutely all local names, or those in the language of the writer, except as they are explanatory, or used as synonyms; only thus can observers in different countries make their work thoroughly available to those engaged in dermatology elsewhere.

The few changes which have been made in the classification are as follows: In the title of Class V., Exsudationes, the word "inflammatory" has been added, as more expressive of the class than simple "Exudative Affections." An addition of a group IX. of ulcerative affections has also been made to the second division of Class V., to include onychia and the varieties of ulcers. The reckoning of all ulcers under exudative or inflammatory affections is open to criti-

cism, inasmuch as the true syphilitic initial lesion has a neoplasm for its foundation; but, as the ulcerative process, or pus formation, is due to inflammatory action, they may, with propriety, be placed here. Finally, in Class IX., following the suggestion of the American Dermatological Association, I have used the designation "*Of granulation tissue*" in place of "Cellular," to designate the pathological condition in lupus, scrofuloderma, etc. The propriety of transferring syphilis or *syphiloderma* from this class to the group of exanthemata, Class V., placing it along side of scarlatina and smallpox, was seriously considered. It was thought best, however, for the present to retain it in its present position, although, as Mr. Hutchinson has pointed out, there are many points of resemblance which might justly place this disease among the group of specific fevers.

Another point of alteration has suggested itself, namely, the addition of a class or group to include what are known as medicinal rashes, such as those caused by copaiba, quinine, iodide and bromide of potassium, etc.; but the subject has appeared to be not yet fully developed, and it was thought best to delay for the present any attempt to assign them any other place than such as the lesion present would give them, as, under erythema, urticaria, etc.

It will be unnecessary here to go over again the points mentioned in my former article, such as those in reference to the naming of the parasitic diseases, the grouping of the glandular affections and the neuroses, the position and relation of scleroderma and morphœa, etc., and I will simply mention the changes made or the new elements introduced.

The term *trichophytosis* is presented as a synonym of the trichophytic disease, as it has been used by several writers, and was adopted by the New York Dermatological Society to indicate this disease. *Chromophytosis* was also adopted by the latter in place of tinea versicolor, and as it is an euphonious word and characterizes in various ways the eruption, it may find favor, and is here suggested as a synonym.

In Class III. the term *zoster* is employed as quite as expressive as the longer word herpes zoster, while by disentangling the word herpes from this relation it can be more rightfully applied to the affections so called under Class V., which of course have no connection with the true inflammatory neurosis zoster or zona. Further thought has confirmed the propriety of the group of Neuroses in Class III., as previously explained: it is more than probable that this class will be added to very largely in future time, as researches demonstrate many diseases of the skin to be dependent upon a nerve causation, of which we already have so many intimations.

In the former classification, the only English name for a disease or lesion was found in this Class III., namely, "trophic disturbances," used to represent those changes in skin tissues resulting from nerve injuries. For these, following the formation of other dermatological names, the term "*dystrophia cutis*" is suggested.

In the heading of Class V., as previously mentioned, I have thought it desirable to add the word "inflammatory," instead of

speaking of this group of diseases simply as exudative affections, inasmuch as the latter term would signify to most minds an exudation on the surface of the skin, which does not exist in many of the diseases coming under this heading; whereas the term inflammatory undoubtedly expresses more correctly the pathological state in most of them. A possible exception to this may be found in the case of psoriasis, which recent investigations appear to show to be an ingrowth of the Malpighian layer, and not an inflammatory affection; but for the present the disease must rest in its former nosological position.

Under bullous eruptions I have introduced *pompholix*, as distinct from pemphigus and hydroa, to indicate the eruption which has been the subject of so much discussion of late, the cheiro-pompholix of Hutchinson, and some of the cases of "dysidrosis" of Fox, and whose pathology was discussed in a recent number of the ARCHIVES by Dr. Robinson. It certainly is a different affection from ordinary pemphigus, and I do not think the evidence adduced has shown the more severe cases to be a real dysidrosis, a disease of the sweat-glands (though I accept this name for certain cases, and it will be found in its proper position in Class II.). The term *cheiro*-pompholix seems less desirable than the shorter one adopted by Dr. Robinson, inasmuch as the affection is not one which is exclusively confined to the hands.

The term *dermatitis exfoliativa* has been here used in place of pityriasis rubra, it having found favor with writers, and being more expressive of the disease; also, as the word pityriasis is retained to be applied to the scaly disease of the scalp, distinct from seborrhœa, and also from psoriasis and eczema, it is well to have a distinct name for the more serious affection known as pityriasis rubra; also, the appellation dermatitis exfoliativa has been adopted by the New York Dermatological Society.

The synonym (or, rather, equivalent) *furunculosis* is introduced as indicative of the state of body in which furunculi develop. The separate lesion is a furunculus; but, as there is seldom a single one of these, the term furunculosis should come into more common use. The termination "osis" corresponds to that which is often employed to signify the state of affairs, and is seen in many dermatological terms.

Melanoderma has been added to Class VII., among pigmentary hypertrophies, to include certain anomalous cases of pigmentary disturbance which are continually occurring in practice, and of which there are a number of pictures extant in the Atlases, where the discoloration is more extensive than in chloasma, or of a peculiar and different distribution from that recognized under this term, generally also of a darker or different hue.

Heretofore there have been several quite distinct affections spoken of under the head of lichen. The American Dermatological Association has adopted the term *keratosis pilaris* in place of the old lichen pilaris, to indicate the epidermal hypertrophy which takes place around hair-follicles, and which is as far removed as possible

from the inflammatory forms of lichen. The innovation seems a good one, and is here adopted. *Tylosis* is here used in place of callositas, inasmuch as thereby may be included also those cases of epithelial hypertrophy of the tongue which have been described as tylosis linguæ. *Verruca necrogenica*, indicating the warty growths which follow dissecting wounds, or poisoning with animal matter, having been omitted accidentally from the former classification, is here inserted in its proper place.

Onychia, as before remarked, has been taken from among hypertrophies of the nail (which it seldom is), and relegated to the fifth class of inflammatory affections, as ulcerative, which is nearer its true pathological and clinical situation. *Onychogryphosis*, the term used to designate an hypertrophied condition of the nails, whereby they become elongated and clawed or talon-like, appears in this scheme, it having been wrongly excluded from the former.

The subject of *atrophia cutis*, atrophy of the skin, Class VIII., has received much attention of late, and its varieties are not yet wholly clear; it appears best, however, to group them under three forms, the general atrophy, and that in lines and patches. Senile atrophy is reserved as a special affection, not included with the others.

Trichorexis nodosa, the name proposed by Kaposi for the peculiar swelling and fracture of the hair in minute nodosities, described by Beigel, Wilson, and others, under different names, seems so peculiarly appropriate and expressive, and has been accepted by so many observers in different nations, that it has won for itself a fixed place in dermatological nomenclature.

It is always desirable not to apply the same term, however it may be modified by expletives, to two affections of entirely different nature; we have therefore placed *fibroma*, Class IX., as the proper term to express the fibrous growths in the skin often known as molluscum fibrosum, or molluscum pendulum. This is sanctioned by many writers, whereas the word molluscum has been retained for, and will probably always cling to, the affection exhibiting sebaceous tumors, either those completely closed or those with an opening, known as molluscum contagiosum, or molluscum sebaceum, which in our classification are reckoned as acne molluscum, Class II. In regard to the true sebaceous nature of these latter, there has been, as is well known, considerable dispute during the past few years; the weight of evidence is again turning towards their sebaceous origin.

In the former scheme, three forms of true leprosy, lepra, or elephantiasis Græcorum were recognized; in the present but two, *lepra tuberosa* and *lepra maculosa*, are given; the third, lepra anæsthetica, is superfluous, inasmuch as both the preceding forms present anæsthetic symptoms, whereas it is doubtful if anæsthetic leprosy could exist without showing at some time either one or both of the preceding forms.

Finally, *melanosis* has been introduced as a synonym for pigmentary sarcoma, because, although any of the forms of cancer may also show pigmentation, in the destructive disease melanosis, as commonly

reported, the pigmentary deposit occurring in different parts of the body is generally, if not always, found associated with sarcomatous elements.

As remarked before, and also on the publication of the scheme two years ago, this nomenclature and classification is not considered perfect, quite the reverse; the subject is still one of much study, and many changes must result from further research, both clinical and microscopical, and it is earnestly desired that the subject shall be agitated and discussed until the dermatological thought of the world can be united upon a nomenclature based on a universal language, as the Latin (with the Greek), and on a classification which will in a measure group together diseases having points of similarity; only thus, in a measure, can we bring order out of the chaos of diseases of the skin, without which the student, and also the medical man, may wander blindly in search of a correct diagnosis of the many forms of disease which attack this organ.

In the discussion which has occupied the New York Dermatological Society more or less for the past two years, the attempt at classification has been laid aside, and the subject of nomenclature alone has been under serious consideration and discussion before deciding upon the best and most feasible name to employ for each disease. This is perhaps a step in the right direction, for it is more essential to establish an uniform naming of diseases than an uniform grouping of them together. If the former is decided and acted upon in practice, matters will be much simplified; members of the society, as well as the profession, will understand then what is meant by definite terms, and a few years will suffice to make the rising generation familiar with names which will then be employed with more definiteness than has previously been the case.

When printing the classification and nomenclature of skin diseases adopted by the American Dermatological Association,* in the last issue of the ARCHIVES, discussion of the subject was invited, believing that further study and criticism would assist much in perfecting a scheme which could be given out to the medical profession of this country and other countries as the deliberate expression of the opinion of those devoted to this subject upon this very important matter. No discussion of it has yet appeared, and we cannot but pass a few criticisms upon it in hope of exciting further attention to the matter; for, as remarked in the note appended to it in the last issue, "We trust and believe that this is but provisional, and that it will be the subject of changes before being finally adopted by the Association." The points now suggested may not all seem to be so very important, but the scheme should aim at being as perfect as possible, and it is in its details that the virtues or faults of such a work are apparent.

The main grouping of the classification happily follows that which

* Archives of Dermatology, Vol. V. No. 1, Jan., 1879, p. 111.

is in common use by many, and little criticism is called for on its main divisions; it would, however, have been better to have given the names of the classes in Latin, indeed to have had even the subdivisions and the entire scheme expressed in this language, that it might be more intelligible to those of other nations engaged in dermatology.

Acne has been here excluded from the class of diseases of the sebaceous glands,—a very grave clinical error, as we regard it; for it is the commonest event to see the varieties of acne simplex, indurata, and rosacea associated with the sebaceous varieties, comedo, seborrhœa, and sebaceous cysts, whereas nosologically they are widely separated in this scheme, and the inflammatory forms are placed in another class of affections. Thus, as long as a sebaceous plug remains quiescent it is a comedo; when, however, its presence excites a surrounding inflammation, it ceases to be a disease of the sebaceous glands, and must be looked for under "inflammation," alongside of psoriasis, eczema, prurigo, impetigo, etc.

Coming now to this Class II., Inflammations, we find the "exanthemata" merely mentioned as a group, and then follow the names of twenty-two diseases, thrown together without order, with no subdivisions to indicate any differences between erysipelas and eczema, acne and pemphigus, prurigo and furuncle, pustula maligna and erythema simplex. The aim of a classification or arrangement of diseases, so as to be readily grasped, is surely not accomplished in this section. Herpes zoster is still retained in this division, although of all other diseases of the skin it stands out pre-eminently as a neurosis, whose nerve pathology rests on a very sure foundation. To place this among "inflammations," as though the inflamed condition of the skin were the most important element, is to violate the idea of a classification, which should of itself, as far as possible, suggest the nature and pathology of the eruption.

A curious foot-note appears appended to "*Dermatitis; a. traumatica; b. venenata; c. calorica*," as follows: "*Including affections not properly included under other titles of this class." We cannot understand its propriety or necessity. Simple inflammation of the skin, distinct from eczema, and excited by purely local causes, as traumatism, poisons, and heat and cold, is a constant clinical fact, a well-defined and perfectly-recognized condition; we do not see how it can include anything else or different, more or less, than is indicated by the name.

A very remarkable omission occurs in this Class II., namely, sycosis. This eruption, indicating a non-parasitic inflammation, affecting the hairy face, exhibiting pustules around the hairs, finds no place in the nomenclature under consideration. Recent microscopic investigation has demonstrated so clearly that this is a perifolliculitis, and clinical observation, in past and present time, has so firmly established it as a distinct disease, that the omission seems incomprehensible. Pityriasis capitis, a scaly disease of the scalp quite distinct from seborrhœa, scaly eczema, psoriasis, etc., is also

excluded, nor does this eruption find any place in this classification; and yet clinically it occurs and is recognized by many. Lichen simplex, as distinct from papular eczema, also finds no place here, whereas there exists little if any doubt as to the reality of the affection. The lichen scrofulosorum of Hebra is also excluded. Equinia or glanders is not mentioned.

In Class III., Hemorrhages, scorbutus has been excluded. If because it is not exclusively a skin disease, the same rule should apply to syphilis and leprosy. The skin symptoms are indeed well marked, and differ decidedly from those of true purpura, from which it is also distinguished completely by its etiology and treatment. No place is found here for hæmatidrosis or bloody sweat, nor does it appear at all in the classification, although a sufficient number of well-authenticated cases have been reported to give this peculiar condition the right of recognition.

Under Class IV., Hypertrophies, we have but two varieties of pigmentary augmentation noticed. The skin changes in Addison's disease find no place here or elsewhere, nor do either pigmentary or hairy nævi. Among hypertrophies of connective tissue we find "Rosacea: *a.* erythematosa; *b.* hypertrophica." How we can have an *erythematous* hypertrophy is hard to imagine. While as a late secondary result in acne rosacea we may have an hypertrophied nose, even to great disfigurement, we regard it as a great error to attempt to force the diffusely-reddened acne rosacea from the group of sebaceous diseases, where it belongs, either to the class of inflammations or to that of hypertrophies. Clinical study shows daily the occurrence of the rosaceous alongside of the indurated and simple acne, and associated with the sebaceous forms of seborrhœa and comedo. We cannot deny that we frequently see a persistent, non-inflammatory erythema on the end of the nose or on the cheeks, unaccompanied by any immediate and acute signs of acne; but if the case is carefully gone into, the history of acne is found, or if the patient is watched long enough it will develop. Moreover, it will be found that this reddened state of the surface is subject to exactly the same etiological conditions as acne, and that a constant and repeated flushing of the face from liquor, or dyspepsia, or other cause has resulted in the permanent defect (probably in vaso-motor innervation) which shows as a reddened surface. There is no proof that even any hypertrophied condition is a primary affair. Secondary effects should not be reckoned as separate diseases in a classification.

Under Class V., Atrophies, we have the two names leucoderma and vitiligo, which have always been regarded as synonymous, both appearing: albinismus also occurs, to indicate, we suppose, the congenital defect of pigment. We find also the term "alopecia furfuracea," used only by Hebra, and we presume therefore with his definition, namely, to indicate the state of chronic seborrhœa together with the gradual falling of the hair accompanying it; we cannot see the propriety of thus placing seborrhœa in two classes, nor understand

wherein this alopecia differs from that intended by the simple term "alopecia" in the classification.

Among connective-tissue New Growths, Class VI., we find "cicatrix," a secondary lesion and not a disease; where an overgrowth of cicatricial tissue occurs all writers agree in calling it a keloidal growth, a false keloid.

Under the second division of this class, new growths of vessels, we find an entirely new name introduced, namely, "angioma pigmentosum et atrophicum," a name suggested at the same meeting by one of the members to indicate the disease which had been described by Hebra under the title "Xeroderma." While it must be granted that the latter name is entirely inappropriate, it seems hardly safe for the Association to put its stamp upon a new name for a disease about whose pathology and course we know so little. Angioma had already been given, probably as a synonym replacing the word nævus, which nowhere appears in this classification; angioma cavernosum follows, to indicate, we presume, deeper and larger blood-vessel new formations. In the New York Dermatological Society, the term nævus was retained for congenital vascular hypertrophy, and angioma was introduced to indicate an acquired dilatation of blood-vessels, to which telangiectasis had been formerly applied.

Lymphangioma here stands alone to represent lymphatic disease of the skin. Whether it is intended that this shall supplant the name *lymphadenoma*, already used by very many, we do not know; certain it is that this latter term is now well understood to represent a definite pathological lesion, described especially by several French writers. Kaposi suggested the term lymphangioma for a condition of the lymphatics resembling angioma or nævus of the blood-vessels, which he had observed in a *single* patient.

Under new growths of granulation tissue we find rhinoscleroma, lupus erythematosus and vulgaris, scrofuloderma, syphiloderma, lepra, carcinoma, and sarcoma. Epithelioma does not occur in the classification; it is intended, of course, to include this under carcinoma, but no such intimation is given, and those not well versed in dermatology might not understand it.

Class VII., Ulcers, we deem unnecessary; they can well find place, as before mentioned, in the class of inflammations, as ulcerative, together with onychia,—which latter, by the way, is not mentioned in the scheme before us. The only excuse for the class of ulcers is its adoption by Hebra; ulcers are generally secondary lesions, the result of previous pathological processes, and so far from being the basis of a distinct class, they can hardly claim the place we have accorded them, and would not, were it not for ulcers of the lower extremities, especially varicose ulcers, which often occur as independent affections, and demand very serious attention.

We have before noted the absence of zoster or herpes zoster from among the Neuroses, Class VIII., and have remarked upon the propriety of its standing as a typical neurosis. No notice is taken in

this classification of the skin lesions which are due directly to injury or disease of nerves; the trophic disturbances of the skin are now so well recognized that they should surely have a place in the nosology of this branch.

Hyperæsthesia is recognized simply as (*a.*) pruritus and (*b.*) dermatalgia. This we regard incorrect; instances are not at all uncommon in which we have an hyperæsthetic condition of skin where there is neither pruritus nor dermatalgia (pain in the skin), cases where it is simply exquisitely sensitive to the touch, while if left alone there is no pain as in true dermatalgia or neuralgia of cutaneous nerves. This condition exists not only in connection with certain nervous diseases but also apparently independently of central disease; the skin in a track of zoster is exquisitely hyperæsthetic.

The group of Parasitic Affections, Class IX., corresponds in the main with the arrangement commonly adopted, and there is little to suggest in its nomenclature or arrangement.

It would have added much to the utility of this scheme if certain synonyms could have been introduced; for, however clear the subject may appear to those whose thoughts are upon it more or less continuously, the employment of some terms which are not universally recognized nor commonly known must confuse those less familiar with the branch and who might look in vain for a name which they have been accustomed to use, and perhaps a name sanctioned by high dermatological authority.

In concluding this glance at the matter of the Nosology of Diseases of the Skin, we cannot forbear reflecting how much trouble and perplexity might have been avoided if writers in the past had been more content to adopt and use names previously suggested by others, and if they had avoided the serious blunder so often committed of attempting the formation of new terms and the distortion of old ones. While we must acknowledge that it is far better for a name to signify in itself the nature or cause of the disease, we cannot but deplore the fact that the continued innovations in Dermatology have caused the study of Diseases of the Skin to become such a *pons asinorum* to many, and the nomenclature and classification of this branch to become a by-word for intricacy and obscurity among the profession.

ON THE NOMENCLATURE AND CLASSIFICATION OF DISEASES OF THE SKIN

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ON THE NOMENCLATURE AND CLASSIFICATION OF DISEASES OF THE SKIN.*

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IT cannot be denied that much of the confusion which has hitherto attended the study of dermatology, and its comprehension by the general practitioner, has, to a certain degree, been owing to the chaos which has always existed in the matter of the nomenclature of this branch from the earliest time even up to the present day. As an illustration, the most marked one, it is true, may be mentioned the fact that no less than one hundred and twenty Latin names are associated with eczema, by different writers, while the total number of designations applied to this eruption exceeds one hundred and eighty! The index of Mr. Wilson's lectures on eczema contains 49 names referred to in the text, that of McCall Anderson's treatise on eczema has 43, while 34 names are found thus connected in Duhring's treatise on diseases of the skin. A little study of the nomenclature of this branch will show it to be most incongruously formed or developed, and the terms in it to be often ignorantly and wrongly applied.

The subject of the classification of diseases of the skin has

* Presented in abstract at the International Medical Congress, London, August, 1881. After the presentation of the classification a committee of five was appointed to consider the subject, and to report at the next meeting of the International Medical Congress. This committee was constituted as follows: England, Dr. Robert Liveing; Austria, Dr. Moriz Kaposi; France, Dr. Emile Vidal; Germany, Dr. Oscar Simon; America, Dr. L. Duncan Bulkley, Chairman.

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also been one which has presented many difficulties, and one which many teachers in various countries have attempted to solve, but all more or less in vain, and often to the greater confusion of the subject. Nor are these matters of nomenclature and classification yet settled, for there still exist among writers and teachers considerable differences, both as regards the names employed in this branch, and the arrangement of the diseases belonging to it. The student who would seek to understand this department of medicine as taught in different countries, is at once embarrassed by the names which he meets with, and it requires no little study to assimilate the views promulgated in various medical centres upon this topic.

It has, therefore, occurred to the writer that a brief consideration of this subject might not be without value on the present occasion, while if it were possible for a system of nomenclature and classification to be, by any means, adopted or sanctioned by a medical body such as the present representing many languages, very much would be done toward simplifying the studying of this branch. Gain would be made even if the authority of the Congress went no further than to the calling of attention to the confused state of the subject, and the recommendation that writers and teachers should abstain from further changes and innovations; although, if it were possible to agree upon some such plan as that here proposed, involving definite fixed principles, it is probable that greater uniformity of thought on this subject would be promoted in different countries. In the advanced state of the study of medicine in the present century, no writer or teacher can afford to ignore the views of others; no one, however eminent, can expect his views or theories to be accepted by others without dispute. Consequently, no one system of nomenclature and classification emanating from any teacher however distinguished nor even that from any one medical school, could be expected fully to harmonize with the views of all at present engaged in the practice and teaching of dermatology.

There are, however, certain principles with regard to the nomenclature, and perhaps also in regard to the classifica

tion of diseases of the skin, upon which teachers in all languages can unite, and whose universal adoption would undoubtedly simplify the subject.

In bringing forward, therefore, for consideration at the present time, the scheme which is here presented, the writer does not offer it as embodying any views peculiar to himself, nor as presenting any great novelties, as will be mentioned later. The scheme is one formed upon a basis which has received very wide acceptation, and one which is undoubtedly gaining strength year by year; it represents, in a measure, the principles brought to light by Willan, but mainly the scheme devised and put into very complete and definite shape by Hebra, nearly forty years ago, which has been largely accepted and acted upon, The scheme of nomenclature and classification here presented, is the result of a very extensive and prolonged study of the subject by the writer, and is an attempt, as far as possible, to harmonize the existing views on the subject of nosology of diseases of the skin; and it is pleasant to state that it has already been favorably received by a number of different writers and teachers in this and other countries since it was first put forth in 1877. If the stamp of authority of such a medical body as this could be placed upon such a plan as is here presented, even if for the present it were but provisional, it would form a basis around which dermatological thought could be centred, and toward the improvement of which all could labor.

First, with regard to the nomenclature here employed, and as to that which it is desirable to employ in this branch, in order that the studies of dermatologists in various countries may be united upon a common basis, and that, as far as relates to teaching, all may rest upon a common footing. It is undoubtedly desirable that a language should be selected which can be employed in common by those teaching in England, France, Germany, Italy, Denmark, America, and all civilized lands. The introduction of words belonging to different languages not only hinders the student at home from understanding what has been written in other countries, but is also a great obstacle to the physician who

would seek to embrace the dermatology of the scientific world, by visiting other lands and observing cases, and by attending lectures and clinics.

As far as possible, therefore, it is believed that terms relating to the individual languages of different countries should be entirely avoided as far as relates to teaching and writing, and that the common language of Latin should invariably be used. Inasmuch, however, as many of the names already well understood in many countries are derived from the Greek, or are actually Greek terms, these undoubtedly should not be changed, but may be retained as far as is necessary for the primary name of the disease, while secondary terms and expletives should be always given in Latin. It would be also advantageous if, while using these names, which may be thus universally adopted, writers should add as synonyms the terms which are employed in their own languages, either popularly or medically. Thus all would learn more or less to connect them with the proper designations of disease; and in case the Latin name should ever be omitted, the other could readily be understood.

In the classification which is here presented, this plan has been followed of adopting the Greek terms Latinized, as far as is possible, for the primary names of disease, while secondary terms and expletives are given in Latin. For convenience of sudy, however, the various divisions of the classification have been expressed in English; and there is no objection to this plan being followed in any or all languages provided the actual names of diseases and the names of classes are still retained in the original tongue.

With regard to the system of classification which is here employed, and presented for your consideration, a few words of preliminary explanation are necessary. All must recognize and appreciate the service done to dermatology by Plenck a hundred years ago, and by his immediate followers, Willan and Bateman, and also by those of the French school, Biett, Cazenave, and others, in establishing order out of chaos. This was arrived at by the classification of diseases of the skin under eight original groups or orders. As all know, these were as follows:

Papulæ.	Pustulæ.
Squamæ.	Vesiculæ.
Exanthemata.	Tubercula.
Bullæ.	Maculæ.

But as the exact study of dermatology advanced, it was soon found that this grouping of disease was by no means sufficient. For, scabies and small-pox were found under the same class of Pustulæ, and eczema and varicella were located together under Vesiculæ, lupus and acne under Tubercula, and so on, simply because at sometime in their course these diseases exhibited somewhat similar phenomena. Since the time of Willan and Bateman the attempts at arranging diseases of the skin in a systematic order have been almost as numerous as the individuals who have appeared from time to time as teachers or writers in this branch. Some have had system in their plans; others leave the subject more obscured than before. It would weary without benefiting, even to attempt to relate the classifications and plans of arrangement which have been adopted by writers of greater or less note.

It may be stated that in the main there are three plans of classification which can be and have been adopted. First, one based upon the gross external appearances presented, as was attempted by Plenck, and Willan, and Bateman, as before given. Second, that of arranging diseases upon a more or less natural or clinical basis, whereby we attempt to group them according to some supposed cause, as has been mainly followed by the French school, with the designation of

Dartrous,	Strumous,
Arthritic,	Cancerous,

and other affections. One of the most recent and earnest advocates of this plan is Mr. Wilson, who divides diseases of the skin in his clinical classification, into twenty-two distinct orders or species, as follows:

1. Eczematous affections.
2. Erythematous "
3. Bullous "
4. Furuncular "
5. Nervous "
6. Vascular "
7. Hæmic "
8. Developmental and nutritive affections.
9. Hypertrophic and atrophic "
10. Alphous "
11. Strumous "
12. Carcinomatous "
13. Zymotic "
14. Syphilitic "
15. Leprous "
16. Pigmentary "
17. Phytodermic "
18. Ungual "
19. Diseases of the hair system.
20. " " sebiparous system.
21. " " sudoriparous "
22. Traumatic affections.

The third method of classification is that which attem to arrange diseases according to the pathological proces occurring or predominant in each disease. This is the p which was first proposed by Hebra in 1845, and which since been modified and simplified by himself and oth and has gained a much larger following than any ot one single plan. In Hebra's classification there are fo twelve groups of diseases, as follows:

I. Hyperæmiæ cutaneæ.
II. Anæmiæ cutaneæ.
III. Anomaliæ secretionum glandularum.
IV. Exsudationes.
V. Hæmorrhagiæ cutaneæ.
VI. Hypertrophiæ.
VII. Atrophiæ.
VIII. Neoplasmata.
IX. Pseudoplasmata.

X. Ulcerationes.
XI. Neuroses.
XII. Parasitæ.

It will be seen here, however, that the pathological plan is not wholly followed, for certain groups, as the third, eleventh, and twelfth are not thus based, but rest on another footing. The classification and revised nomenclature recently put forth by Auspitz contains so many and such radical innovations that it is difficult to be understood and appreciated even by those well versed in dermatology: how far its features will be accepted and adopted remains yet to be seen. It claims to have a natural basis, but can hardly claim to rival in simplicity and practical utility that here presented.

From this it will be noted, therefore, that all plans of classification are and must be more or less imperfect, and to a greater or less degree artificial. Indeed, in the present state of dermatological science all of them cannot but be more or less incomplete, for, with increasing knowledge in regard to the nature of these diseases will come greater simplification and perfection in their nosology. The classification which one hundred years ago served to bring light out of darkness, and in a measure satisfied writers for many years, namely, that based on the coarse, lesional conditions of the disease, as first detailed by Plenck, is no longer sufficient for the present time. Nor can such plans as those proposed by Alibert, Hardy, or others, who group them upon the supposed causation, entirely suffice the requirements of to-day. The science of more modern times demands the surest possible foundation for classification as well as therapeutics; and that grouping of diseases which places those together which are in reality most closely allied, is the one which is surest to stand.

The present classification is based, as will be seen, very largely upon that of Hebra, the main principles of which have stood the test of nearly forty years of hard work and active criticism, together with the flood of light thrown upon the subject by the microscope; and it may be said that there are no real innovations here other than attempts at

simplifying the subject, still within the bounds originally laid out by that master mind of modern dermatology, Hebra. In preparing this nomenclature and classification, however, I have taken advantage of suggestions from Wilson, Neumann, Duhring, Fox, and others, including French and English writers, and in the comparatively few points in which there are essential differences from the scheme proposed by Hebra I have sought to throw into the scale the weight of the united authority of more than two writers. This is not presented as a classification which I should wish to have adopted as a final one; but it is offered as a report of progress, representing, as I conceive, the present state of information and judgment of the greatest number of those who are, from clinical and didactic experience, the best able to understand the requirements and proprieties of a nomenclature and classification of diseases of the skin. This scheme is open to criticism, as I am well aware, and I am also open to conviction in regard to any of its elements, and expect to make such changes in it in the near and far future, as advancing studies in dermatology may show to be advisable.

As just mentioned, this nomenclature and classification is not all that could be desired, as it is based on several modes of grouping disease, namely, etiological, clinical, pathological, and histological data. But I shall not attempt to defend this, because its different elements have received the sanction of those well versed in dermatology, and practically it has proved most serviceable in teaching.

As will be seen, diseases of the skin are here divided into eight classes, which is as few as could be expected in so vast a subject, which deals with at least one hundred distinct conditions of disease upon the skin. Most of these classes are again subdivided into groups, which are readily intelligible to all.

CLASSIFICATION OF DISEASES OF THE SKIN.

CLASS I. **Morbi cutis parasitici.** Parasitic Affections.
" II. **Morbi glandularum cutis.** Glandular Affections.
" III. **Neuroses.** Neurotic Affections.
" IV. **Exsudationes.** Exudative or Inflammatory Affections.
" V. **Hæmorrhagiæ.** Hæmorrhagic Affections.
" VI. **Hypertrophiæ.** Hypertrophic Affections.
" VII. **Atrophiæ.** Atrophic Affections.
" VIII. **Neoplasmata.** New Formations.

Class I. Morbi cutis parasitici. Parasitic Affections.

A. VEGETABLE.
- 1. Tinea trichophytina (or trichophytosis) (*parasite—Trichophyton tonsurans*): corporis (or tinea circinata); capitis (or tinea tonsurans); barbæ (or sycosis parasitica); cruris (or eczema marginatum).
- 2. Tinea favosa (or favus) (*parasite—Achorion Schœnleinii*).
- 3. Tinea versicolor (or chromophytosis) (*parasite—Microsporon furfur*).

B. ANIMAL.
- 1. Phthiriasis (or pediculosis): corporis, capitis, pubis (*parasite—Pediculus*).
- 2. Scabies (*parasite—Acarus scabiei*).

Class II. Morbi glandularum cutis. Glandular Affections.

A. DISEASES OF THE SEBACEOUS GLANDS.
- I. Due to faulty secretion or excretion of sebaceous matter.
  - 1. Acne sebacea: oleosa, cerea, cornea (or seborrhœa).
  - 2. Acne punctata: nigra (or comedo); albida (or milium).
  - 3. Acne molluscum (or molluscum sebaceum).
- II. Due to inflammation of sebaceous glands with surrounding tissue.
  - 4. Acne simplex (or vulgaris)
  - 5. Acne indurata.
  - 6. Acne rosacea.

B. DISEASES OF THE SWEAT-GLANDS.
- I. As to quantity of secretion.
  - 1. Hyperidrosis.
  - 2. Anidrosis.
- II. As to quality of secretion.
  - 3. Bromidrosis.
  - 4. Chromidrosis.
- III. With retention of secretion.
  - 5. Dysidrosis.
  - 6. Sudamina.

Class III. Neuroses. Neurotic Affections.

1. Zoster (herpes zoster or zona).
2. Pruritus.
3. Dermatalgia.
4. Hyperæsthesia cutis.
5. Anæsthesia cutis.
6. Dystrophia cutis (or trophic disturbances).

Class IV. Exsudationes. Exudative or Inflammatory Affections.

A. Induced by Infection or Contagion.

1. Rubeola (or measles).
2. Rötheln (or German measles).
3. Scarlatina.
4. Variola.
5. Varicella.
6. Vaccinia.
7. Syphilis.
8. Pustula maligna.
9. Equinia (or glanders).
10. Diphtheritis cutis.
11. Erysipelas.

B. Of Internal or Local Origin.

I. Erythematous.
- 1. Roseola.
- 2. Erythema — simplex. / multiforme. / nodosum.
- 3. Urticaria.

II. Papular.
- 4. Lichen — simplex. / planus. / ruber. / scrofulosus.
- 5. Prurigo.

III. Vesicular.
- 6. Herpes — febrilis. / iris. / progenitalis. / gestationis.

IV. Bullous.
- 7. Hydroa.
- 8. Pemphigus — vulgaris. / foliaceus.
- 9. Pompholix (or cheiro-pompholix).

V. Pustular.
- 10. Sycosis (or folliculitis pilorum
- 11. Impetigo.
- 12. Impetigo contagiosa.
- 13. Ecthyma.

VI. Multiform, *i. e.*, erythematous, papular, vesicular, pustular, etc.
- 14. Eczema.
- 15. Dermatitis — calorica. / venenata. / traumatica. / medicamentosa.

VII. Squamous.
- 16. Dermatitis exfoliativa (or pityriasis rubra).
- 17. Psoriasis.
- 18. Pityriasis capitis.

VIII. Phlegmonous.
- 19. Furunculus (furunculosis).
- 20. Anthrax.

IX. Ulcerative.
- 21. Onychia.
- 22. Ulcus — simplex. / venereum.

Class V. Hæmorrhagiæ. Hæmorrhagic Affections.

1. Purpura { simplex. / papulosa. / rheumatica (or peliosis rheumatica). / hæmorrhagica.
2. Hæmatidrosis (or bloody sweat).
3. Scorbutus.

Class VI. Hypertrophiæ. Hypertrophic Affections.

A. Of Pigment. { 1. Lentigo. / 2. Chloasma. / 3. Melanoderma. / 4. Nævus pigmentosus. / 5. Morbus Addisonii.

B. Of Epidermis and Papillæ. { 1. Keratosis pilaris (or lichen pilaris). / 2. Ichthyosis. / 3. Cornu cutaneum. / 4. Clavus. / 5. Tylosis (or callositas). / 6. Verruca { vulgaris. / senilis. / acuminata. / necrogenica.

C. Of Connective Tissue. { 1. Scleroderma. / 2. Sclerema neonatorum. / 3. Morphœa. / 4. Elephantiasis (Arabum). / 5. Dermatolysis. / 6. Frambœsia (or yaws).

D. Of Hair. 1. Hirsuties. 2. Nævus pilosus.

E. Of Nail. 1. Onychogryphosis. 2. Onychauxis.

Class VII. Atrophiæ. Atrophic Affections.

A. Of Pigment. { 1. Albinismus. / 2. Leucoderma (or vitiligo). / 3. Canities.

B. Of Corium. { 1. Atrophia cutis { propria. / linearis (or striæ atrophicæ). / maculosa (or maculæ atrophicæ). / 2. Atrophia senilis.

C. Of Hair. { 1. Alopecia. / 2. Alopecia areata. / 3. Trichorexis nodosa (atrophia pilorum propria, or fragilitas crinium).

D. Of Nail. Onychatrophia.

Class VIII. Neoplasmata. New Formations.

I. Benign New Formations.

A. Of Connective Tissue. { 1. Keloid. / 2. Fibroma (or molluscum fibrosum). / 3. Xanthoma (xanthelasma or vitiligoidea).

B. Of Granulation Tissue. { 1. Lupus { vulgaris. / erythematosus. / 2. Scrofuloderma. / 3. Rhinoscleroma.

C. Of Blood-Vessels. { 1. Nævus vasculosus. / 2. Angioma (or telangiectasis).

D. Of Lymphatics. { 1. Lymphadenoma cutis. / 2. Lymphangioma cutis.

E. Of Nerves. Neuroma cutis.

II. Malignant New Formations.

1. Lepra { tuberosa / maculosa } (leprosy, or elephantiasis Græcorum).
2. Carcinoma { epitheliomatosum (epithelioma and rodent ulcer). / papillomatosum (or papilloma).
3. Sarcoma { idiopathicum. / pigmentosum (or melanosis).

This nomenclature and classification is essentially the same as was presented by the writer first in the ARCHIVES OF DERMATOLOGY four years ago (April, 1877), and again brought forward, with slight modification, two years later (April, 1879). The great aim from the first has been to avoid any innovations, and while simplifying the presentation of the subject to the greatest degree possible, to harmonize, as far as could be done, the views of others on the subject. This scheme is, therefore, now offered for your consideration and criticism, with the revisions which have seemed proper after still another two years' further occupation in cutaneous medicine, and after much study and thought on the subject of its nosology; also after almost daily employment of this nomenclature and classification in teaching.

It has seemed best to place the class of parasitic affections first, as being the first group of diseases which has reached the ultima Thule, or final element in classification, namely, an etiological basis. This group has long been accepted, even in classifications claiming a histological foundation. It will be seen here that the term "tinea" has been adopted from many writers, to indicate all of the vegetable parasitic affections. Alopecia areata, which has sometimes been placed here under the designation tinea decalvans, is omitted; for, although there has been some recent discussion with regard to its parasitic nature, the weight of evidence is so slight that it does not seem wise to re-admit it yet to this group. Under animal parasitic diseases but two affections are placed; although this group might be increased by the addition of other parasites which sometimes infest the human skin.

The second class is also one which is recognized in other classifications, and corresponds to a similar group in Hebra's arrangement; it is eminently a useful one from a clinical standpoint, embracing all affections occurring in connection with the glands of the skin. It will be seen that the various forms of inflammatory acne, as well as those exhibiting only functional derangement, are located

here, because both pathologically and clinically as well as therapeutically they should all be considered together. The diseases of the sweat glands are also well recognized and make a separate clinical group.

As the next best recognized and most clearly defined clinical class, with the beginning of histological support, as far as relates to herpes zoster and dystrophia cutis, or trophic disturbances, we place the neuroses of the skin, a class which is continually being more and more clearly defined, and which already receives recognition in many classifications. The question naturally arises, how far this class should be increased by the addition of certain other affections exhibiting nervous phenomena, especially by such eruptions as erythema and urticaria. But as the desire has been to avoid innovations as far as possible, these have been yet retained where they have long been located. There is danger, of course, of extending this class too widely and upon too slender a foundation. Thus, for instance, true prurigo and eczema exhibit nervous phenomena of itching, burning, etc., in a most marked degree, and yet one is not prepared by any means to place them among the neuroses of the skin. About the propriety of the location of the six which are comprised in this class, however, there can be but little doubt. There is little need for explanation or apology for the term dystrophia cutis, which I have introduced to indicate the skin lesions resulting from injury or disease of nerve trunks.

The next, or fourth class, which includes very many of the most important and common diseases of the skin, is undoubtedly open to more or less objection. But until the diseases placed under it can be better located elsewhere, I do not think it wise to attempt their transference to other positions. It will be seen that there are two groups recognized within this class: First, a certain number of diseases which are induced by infection or contagion; and second, others of recognized or undetermined internal or local origin. All these diseases are characterized by a certain amount of exudation or inflammatory action which forms the basis of their grouping; while in the second

group the diseases are classed according to predominant primary lesions, following the names of Willan.

The only real innovation in the first group belonging to this class, is in placing syphilis here among other infectious or contagious diseases, rather than among those characterized by new formations, as has been previously the case in the classification of Hebra and others. Some time ago Mr. Jonathan Hutchinson wrote very ably and forcibly in reference to the propriety of locating syphilis among the exanthemata, and study and observation have led me more and more to recognize the soundness of this suggestion. While the late forms of syphilis are undoubtedly characterized by new deposits in the texture of the skin and other organs, the essential character of the disease undoubtedly lies in its earlier period, when we have the general eruption, the more or less febrile disturbances, and the greater contagiousness of the disease. The late phenomena are indeed sequelæ; as a disease it belongs more properly with small-pox, whose eruption it sometimes simulates quite closely.

In the second group of this fourth class it will be seen that the diseases are arranged more or less together according to their gross lesional aspects; this group being subdivided into nine others, following much the original classes of Willan. It will be noticed in the first special group that erythema simplex and multiforme, which in Hebra's classification were separated, have been placed together, with other more decidedly inflammatory affections. This, in a measure, simplifies the original classification of Hebra by doing away with the class of hyperæmiæ; another class of Hebra's, namely, anæmiæ, is likewise omitted, as practically non-existing.

A new term is found in the sixth sub-group, namely dermatitis medicamentosa, a term recently suggested by Duhring to indicate the eruptions produced on the skin by the internal administration of certain drugs. Another subgroup has also been added, namely, phlegmonous, to include furuncle and anthrax; and yet another one, namely, ulcerative, to embrace onychia and ulcers, which latter have been

placed in a separate class by Hebra and others. It is true that ulcers are, in the main, secondary lesions, and objections may be raised against their being granted a place in a classification which deals with separate primary diseases. But inasmuch as they appear at times to be primary affairs, it is convenient to have a niche where they may be located nosologically; and as ulcers have been granted even the place of an independent class by Hebra and others, it was thought desirable to admit them here.

The next, or fifth class, is a very simple one, characterized by hemorrhages within the skin, and little comment is demanded, and little objection can be raised in regard to the diseases here located.

The class of hypertrophic affections corresponds very closely in its elements with the same one in the classifications of other writers. A single new term is introduced in the group of hypertrophies of the epidermis and papillæ, namely, keratosis pilaris; this was adopted two years ago by the American Dermatological Association in place of the term lichen pilaris, because the latter was so manifestly inappropriate, the elements of epidermal hypertrophy in this lesion being more nearly related to horny growths than to the inflammatory diseases commonly known as lichen. Under the head of hypertrophy of connective tissues, scleroderma and morphœa are arranged as separate and distinct affections, in conformity with the views of many recent writers upon the subject; sclerema neonatorum is also reckoned as a distinct disease. The other elements of this class do not require explanation.

The only point worthy of special comment in the seventh group, of atrophic affections, relates to that peculiar condition of the hair which has been the subject of study of late years, namely, trichorexis nodosa; this is here placed as a synonym for atrophia pilorum propria, and fragilitas crinium. The varieties and special characteristics of the various nutritive diseases which may affect the hairs are by no means as yet well established, and this portion of the classification will undoubtedly be subject to change with fuller study and knowledge of these affections.

The next group, that of neoplasmata, is seen to embrac the two groups in Hebra's classification, of neoplasmata, an pseudoplasmata; these are here represented in the tw designations, benign new formations and malignant ne formations. The diseases, and their arrangement in thi group, are very much those recognized by Hebra and others with the exception of the exclusion of syphilis from it position here, which, as we have seen, should be place among contagious diseases, in the fourth class.

It will be noticed that the name lepra is given here as th proper designation for true leprosy, or the elephantiasi Græcorum of older writers, and that it is consequently en tirely separated from any connection with psoriasis, wit which it has occasionally been associated as a synonym this is in accordance with the views and writings of ver many recent authors, and it is hoped that unanimity o opinion will soon prevail on this as on certain other unde cided points. It will be also noticed that lepra has but tw varieties here recognized, namely, lepra tuberosa and macu losa, the designation lepra anæsthetica not appearing. Th reason of this latter is, that it is questionable whether an such affection as neurotic leprosy exists, as distinct an separate from lepra tuberosa or maculosa; these latter ce tainly exhibit the anæsthesia, but it is doubtful if this latte symptom is ever manifested without the other phenomen belonging to the tuberose and macular forms.

One single further thought may be added in regard to a error in nomenclature which is very common, and yet pr ductive of much harm and confusion, and which should b all means be avoided by those aiming at clearness and sim plicity in nomenclature and classification. This refers t using the name of one disease adjectively with anothe Thus, it is very common to have such terms as these used syphilitic lichen, and syphilitic acne, lupus, and psoriasis This has even gone so far as to result in compound word as, lupus-psoriasis, varicella-prurigo, and the like. All suc combinations are confusing to those learning the branch and not wholly intelligible to those well versed in it. It i manifestly improper to modify the name of one disease ac

jectively by the name of another entirely distinct in nature and character. Thus, lupus, psoriasis, acne, and lichen are distinct and well recognized morbid conditions, and are not caused by syphilis. The proper terms to indicate these phases of the syphilitic eruption are, the papular, pustular, tubercular, etc., syphiloderm or syphilide; or, if it is desired to indicate the resemblance to these other eruptions more closely, the expressions lupoid or lichenoid syphiloderm (that is, a syphilitic eruption *like* lupus or lichen) are unobjectionable, or such terms as a psoriasiform or acneform syphilide.

In concluding this brief consideration of the very important subject, I would again call attention to the necessity of unity and agreement among writers in this branch, and to the importance of the avoidance of all innovations. This scheme is not considered perfect, quite the reverse. The subject is still one of much study on the part of the writer, and many changes must result from further research, both clinical and microscopical. And it is earnestly desired that the subject shall be largely discussed, until the dermatological thought of the world can be united upon a nomenclature based upon a universal language, as the Latin (together with such Greek terms as are now in use), and on a classification which will, as far as possible, group together diseases having points of similarity. The thought also arises to the mind, as to how much trouble and perplexity might have been avoided if writers in the past had been more content to adopt and use names previously suggested by others, and if they had avoided the serious blunder so often committed of attempting the formation of new terms, and the destruction of old ones. While we must acknowledge that it is far better that a name should signify in its composition the nature and cause of the disease, we cannot but deplore the fact that the continued innovations which have been made in this department of dermatology have caused the study of diseases of the skin to become such a *pons asinorum* to many, and the nomenclature and classification of this branch to become a by-word among the profession for intricacy and obscurity.

Announcement for 1881

ARCHIVES OF DERMATOLOG

A QUARTERLY JOURNAL OF

SKIN AND VENEREAL DISEASES

EDITED BY

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The editor takes pleasure in announcing that the office of publication o ARCHIVES OF DERMATOLOGY has been transferred again to New York, and every effort will be made to maintain or excel the high standard of excel which has in former years called forth the universal commendation of the me press in this country and in Europe.

The present issue, of January, 1881, begins the seventh volume, in an imp form and more elegant appearance, and every effort will be made to increas value and usefulness of the ARCHIVES to the general practitioner and spec Its aim has been and shall still be to meet the wants of the *general practi* and to serve as a communication between the specialist, whose entire attent devoted to skin and venereal diseases, and those in general practice, that the gained experience of the latter may reach the former.

The ARCHIVES OF DERMATOLOGY is now *the only Scientific Journal pu in the English language devoted exclusively to skin and venereal diseases*, a of service to every practitioner.

As indicative of its character it may be stated that the preceding six vo have contained one hundred and twenty-six original articles, and fifty-two c communications by sixty-eight different writers. Among those in this co may be mentioned the following well-known gentlemen: Dr. I. E. Atkinso late Dr. Bumstead, Drs. R. Campbell, Howard F. Damon, Louis A. Du Geo. H. Fox, Wm. A. Hardaway, Jas. Nevins Hyde, E. L. Keyes, F. N H. G. Piffard, A. R. Robinson, E. C. Seguin, S. Sherwell, F. R. Sturgis, R. W lor, W. H. Van Buren, A. Van Harlingen, R. F. Weir, J. C. White and Wigglesworth. Of fourteen contributors in other countries the names of t Dr. Tilbury Fox, Mr. J. L. Milton and Mr. Balmanno Squire, of Londo Drs. H. S. Purdon and Walter G. Smith, of Ireland, stand prominent.

With a view of furnishing simple matter in each issue of immediate pr advantage to the general practitioner, the editor will endeavor, as space p to give, as in the past, plain comments on common diseases of the skin form of serial articles.

The digest department will continue, as before, to epitomize the current ture of the day by means of the able staff of collaborators, who have alre faithfully and earnestly aided the Journal. Changes occur in the staff fro to time, but the aim will be to maintain the high standard of excellence branch which has, in times past, been so favorably noticed by the medica During the past year it has gained Mr. Malcolm Morris and Dr. T. Colco (brother of the late Tilbury Fox), both of London, England.

OPINIONS OF THE "ARCHIVES."

"This journal, under Dr. Bulkley's management, continues to be conducted with mu It contains not only original papers which represent most of the dermatological work do States, but excellent abstracts of all European work in this department."—*London Practi*

"In every sense a credit to American literature."—*Medical Record.*

"'The Archives of Dermatology' is not only the only journal in the English language to the specialty of skin diseases, but, it may be safely said, is unequalled by any similar French, Italian or German. The numbers before us present an excellent example of which, while containing scientific matter for the specialist, also furnishes practical inform the general practitioner. Here the practitioner may find what it is impossible to get in book,—from the circumstances of the case,—a varied armory, from which he can draw *for every emergency.* We can cordially recommend this journal to the general reader as *journal which is not for specialists only.*"—*Philadelphia Medical Times.*

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G. P. PUTNAM'S SONS, NEW Y

ANALYSIS OF ONE THOUSAND CASES

OF

SKIN-DISEASE,

WITH CASES AND REMARKS ON TREATMENT.

By L. D. BULKLEY, A. M., M. D.

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1875.

ANALYSIS

OF

One Thousand Cases of Skin-disease

WITH

CASES AND REMARKS ON TREATMENT.

It is my purpose in the present paper to give some of the results of American experience in the observation and treatment of diseases of the skin, a branch which by no means merits the practical neglect with which it has been treated, but which repays to the fullest degree the most careful and serious consideration. I shall first make a short statistical inquiry as to the relative frequency of the different forms of cutaneous affections, and the influence of age, sex, etc., in their production, as based on an analysis of the cases treated at the Outdoor Department of Bellevue Hospital during the year 1874 by Dr. Maxwell and myself, Dr. Beverhout Thompson also attending a short time, and shall afterward invite attention to some practical methods of treatment of these maladies which experience has shown to be of value. In my remarks I wish to be distinctly understood as expressing my own opinions as to theory and methods of practice, and do not thereby implicate in any manner either Dr. Maxwell or Dr. Thompson. I saw about one half of the cases.

The total number of new patients recorded in the cl of skin-diseases during the entire year was one thous and eighty-four, but of this number fifty were either wron entered in this department or there was no diagnosis giv and I have further struck off the first thirty-four patie of the year to make the number exactly one thousand, convenience of comparison with other cutaneous statist The cases of diseases of the skin I have arranged in t tables: the first giving an alphabetical list of the disea and the number of instances of each, and the sex of patients; and the second arranged in the order of frequen with the percentage of the same.

TABLE I.

Disease.	Male	Female	Unknown	Total	Disease.	Male	Female	Unknown .....
Acne	42	69	...	111	Neuroma (painful)	1	...	...
Alopecia	3	1	...	4	Onychia	1	2	...
Bromide of Potass. Eruption	1	...	...	1	Pemphigus	...	2	...
Chloasma	..	3	...	3	Phthiriasis	22	7	...
Clavus	...	2	...	2	Pityriasis	4	35	...
Dermatitis	5	9	...	14	Prurigo	6	3	...
Ecthyma	4	3	...	7	Pruritus	9	23	...
Eczema	137	164	1	302	Psoriasis	23	27	...
Elephantiasis Arabum	...	1	...	1	Purpura	3	4	...
Erectile Tumor (pedunculated)	1	...	...	1	Roseola	...	2	...
Erysipelas	8	5	...	13	Röthelu	...	1	..
Erythema	7	18	...	25	Scabies	21	15	...
Excoriationes	2	1	...	3	Scleroderma	...	1	
Furunculi	10	9	...	19	Scrofuloderma verrucosum	1	1	..
Herpes	9	12	1	22	Sycosis	8	...	...
Hyperæsthesia cutis	2	...	..	2	Syphilodermata	28	70	..
Hyperidrosis (pedum)	1	1	...	2	Tinea	28	20	...
Ichthyosis	1	2	..	3	Ulcera	5	15	...
Lichen	6	6	...	12	Urticaria	13	29	...
Lupus	3	9	...	12	Varioloid	1	...	...
Miliaria	1	...	...	1	Verruca	5	...	...
						424	574	2

TABLE II.

Disease.		Number.	Per cent.
Eczema	Impetiginous 5	302	30.2
	Lichenous 8		
	289		
Acne	Sebacea 12	111	11.1
	Punctata 8		
	Molluscum 1		
	Simplex 40		
	Indurata 22		
	Rosacea 28		
Syphilodermata		98	9.8
Phthiriasis	Capitis 24	57	5.7
	Corporis 20		
	Pubis 1		
	11		
	Phthiriophobia 1		
Tinea	Trichophytina Circinata 21	48	4.8
	Trichophytina Sycosis 2		
	Trichophytina Tonsurans 10		
	Versicolor 9		
	Favosa 5		
	Onychia Parasitica 1		
Urticaria		42	4.2
Scabies		36	3.6
Pruritus	Senilis 8	32	3.2
	Vulvæ 3		
	Pregnans 1		
	20		
Erythema	Faciei 11	25	2.5
	Multiforme 2		
	Papulatum 2		
	Papulatum et nodosum 1		
	9		
Herpes	Zoster 12	22	2.2
	Faciei 2		
	Labialis 7		
	Linguæ 1		
Ulcera		20	2.0
Furunculi		19	1.9
Dermatitis	Venenata 3	14	1.4
	Calorica 1		
	Traumatica 2		
	8		

Disease.		Number.	Per cent.
Erysipelas	Faciei 8	13	1.3
	Capitis 1		
	4		
Lichen	Scrofulosorum 1	12	1.2
	Simplex 5		
	Agrius 2		
	Lividus 1		
	3		
Lupus	Erythematosus 2	12	1.2
	Vulgaris 10		
Pityriasis		11	1.1
Prurigo		9	0.9
Sycosis		8	0.8
Purpura	Rheumatica 1	7	0.7
	Hemorrhagica 1		
	Simplex 5		
Ecthyma		7	0.7
Verruca		5	0.5
Alopecia	Areata 1	4	0.4
	Partialis 1		
	2		
Epithelioma	Nasi 3	4	0.4
	Labialis 1		
Chloasma		3	0.3
Excoriationes		3	0.3
Ichthyosis		3	0.3
Onychia		3	0.3
Clavus		2	0.2
Hyperæsthesia cutis		2	0.2
Hyperidrosis (pedum)		2	0.2
Pemphigus		2	0.2
Roseola		2	0.2
Scrofuloderma verrucosum		2	0.2
Elephantiasis Arabum		1	0.1
Erectile Tumor (pedunculated)		1	0.1
Miliaria		1	0.1
Neuroma		1	0.1
Eruption from Bromide of Potassium		1	0.1
Rötheln		1	0.1
Scleroderma		1	0.1
Varioloid		1	0.1
		1000	

It will be seen on glancing at the tables that all the diseases which have been noted are arranged under forty-three heads, and that several of these again include a number of different forms usually recognized as separate diseases; thus acne has six varieties; eczema includes much that might be called by some impetigo and lichen; tinea includes the tinea circinata and tonsurans, or ring-worm of the body and head; also favus, parasitic sycosis, and so on.

Considerably more than one half of all the patients were females—five hundred and seventy-four to four hundred and

twenty-four males, an excess of one hundred and fifty fifteen per cent of females—and in two cases the sex w not stated. But little can be learned, however, from this, the females are more at leisure to come during the dispens hours, and many of the diseases are more annoying to t sex than to men. But a comparatively small proportion w children, except in the case of eczema, where about one si of the entire number were five years of age or under. T number of cases is too small to draw any conclusions as the season of the year in which various diseases are wont appear, nor can any deductions be made as to the effect occupation in producing disease, except in certain instanc It is, however, certain to my mind that a very large share cases are the direct result of filth, neglect of hygienic ru and of poor and improper food. As an instance of the ef of filth I would cite the one hundred and forty-one cases to animal and vegetable parasites, one seventh of the wh number analyzed; of the neglect of hygienic considerati the ninety-eight cases of syphilitic eruptions, or one te of the whole; and of dietary errors, the one hundred seventy-seven cases of acne, erythema, and urticaria, or sixth of the whole; together with the direct effect of diet errors in causing outbreaks of eczema, furuncles, pruri lichen, etc.

In further commenting upon these cases I shall speak the diseases in the order of their frequency, taking occas at times to compare these statistics with those which h been published in other cities.

1. *Eczema.*—First in the list of diseases of the skin, fi its frequency as well as its very great importance, sta eczema; and in all the statistics published it has alw outnumbered any other form of cutaneous disease many- (with the single exception, I believe, of McCall Anders hospital statistics,* where scabies equals eczema in frequen

* Diseases of the Skin—Analysis of Eleven Thousand Cases. London, 18

the proportion being always about the same; namely, one third of all cases. Under eczema I have included its lichenous and impetiginous forms, although it will be seen that the term lichen is also retained to represent a separate disease, as will be noticed later. Eczema occurred three hundred and two times in the one thousand cases; one hundred and sixty-four females, one hundred and thirty-seven males; in one case the sex was not noted. This relation of the sexes is quite at variance with what has been stated by Wilson * with reference to its occurrence in the middle and higher walks of life. Thus in his first thousand the majority of males over females was forty-four, in the second thousand thirty-one, the majority of the whole two thousand being seventy-five; whereas with us the proportion was reversed, the excess being twenty-seven in the thousand in favor of females.

It is impossible from dispensary statistics to give the ages at which the disease appears, as in very many of the cases it was of long duration or a second or later attack; nor can we adduce any thing definite as to the length of time under treatment, although notes were made of many cases, as the attendance of the poor is often fitful, and dependent very frequently upon their ability to find employment or not, and they seldom are seen as long as the physician would wish. Again, ignorance and forgetfulness on the part of patients do much to prevent or retard a cure, assisted to a large degree by the erroneous diet and habits of life, which it is often impossible to alter.

It may be interesting, however, to consider for a moment the age of those applying for relief, as in the following table:

1 year and under	18	20 to 30 years	39
1 to 2 years	16	30 to 40 years	38
2 to 3 years	9	40 to 50 years	38
3 to 4 years	5	50 to 60 years	40
4 to 5 years	8	60 to 70 years	28
5 to 10 years	20	70 years and over	3
10 to 20 years	39	Uncertain age	1

* Journal of Cutaneous Medicine, etc., vol. i, 1868, p. 258.

Here it will be seen that the greatest predisposition eczema is during the first year of life, when eighteen cas were observed; and during the first five years fifty-six cas or more than one sixth of the whole, occurred; the next fi years, five to ten, giving but twenty, or a total of seventy-s for the first decade. Wilson's statistics give but twenty-ni for the first thousand and forty-one for the second during tl first decade, showing that the lower station in life has mu to do in rendering the very earlier years subject to eczen Again, the thirty years from the ages of thirty to sixty ga with Wilson one hundred and sixty-two patients with eczer in each thousand against one hundred and sixteen in o statistics. Now this period between thirty and sixty we kn to be that most liable to gouty trouble, and it is quite pr able that the indolent and sedative life with over-indulgen of the rich has much to do in making eczema more comm during middle life in the higher walks of English socie than among the lower classes in America.

As to the treatment of these cases, having entered qu fully into "The Management of Eczema," in a paper re before this association within the current year,* I will not this time dwell much on the subject. Quite a proporti of these cases were in the young, as before stated; eighte of the patients occurring in the first year of life, fifty-six all being five years or under. Eczema at this period requi very careful and judicious treatment. Each case almost w require a different course; and it is well to remember that it the *patient* which is to be treated, and not the disease. I not order poultices to remove the crusts of infantile eczen as many do, preferring much to cause their separation means of fatty matter. Among the poor, and sometin among the rich, I have the head soaked in cod-liver (sweet-almond oil answers), or I have an ointment applied

*Transactions of American Medical Association, vol. xxv, 1874, page 1 Reprint, G. P. Putnam's Sons, New York.

once in a tolerably soft form; directing that the head shall not be washed at all, but as fast as the crusts fall, perhaps with slight assistance from the finger-nail, the ointment is to be re-applied; the idea being to thoroughly protect the irritated mucous layer of the skin, and to shield it from air and water. Occasionally the crusts will accumulate and adhere, and it becomes necessary to use a poultice or wash the head well with warm water and borax; but this, in my experience, is very rare.

During the past year I have employed very largely tannin in ointment (one drachm to one ounce) in eczema, and like it very well. A very common treatment is to bathe first with the *liquor picis alkalinus*, diluted ten or twelve times, twice a day, and apply the tannin ointment immediately afterward. I have also used with very satisfactory results the subnitrate of bismuth in ointment (half a drachm to one ounce), and prefer it in very many instances to that of zinc, as commonly employed. I would again mention the value of the rose-ointment as an excipient, and its efficiency when the simple ointment has failed. Several cases of eczema rubrum covering quite a large part of the body of children one or two years old were seen. These cases are often most obstinate. Our best results were attained by starch and alkaline baths, and powdering the surface with subnitrate of bismuth and starch.

Internal treatment is always required, and I believe that the largest percentage of good results was obtained by means of cod-liver oil in appropriate doses. Syrup of the iodide of iron is also invaluable in treating eczema in children.

In adults most of the cases of eczema were of the chronic form, very many of them being in the legs, and dependent upon varicose veins. The treatment of these is very frequently unsatisfactory, because of the continued existence of the cause, especially among the poor, who can not give the necessary time to rest. Elastic stockings should be insisted on in eczema of the legs when the disease has recurred often

or lasted long; for, although the veins may not appear to be varicose, there is often a want of tone of the capillaries, which is supplied by the stockings. We have had good results from the use of tarry preparations, and have known a moist eczema to be completely healed after a very few applications of the *liquor picis alkalinus* in full strength. A common treatment in chronic eczema is equal parts of tar and oxide-of-zinc ointments, with the addition of a little mercurial ointment, as the citrine, when the surface ceases to be moist.

In place of the *sapo viridis*, or green potash soap of the Germans, I have been employing the ordinary American soft-soap made with potash, and with almost, if not quite, as good results, although it contains relatively less potassa. In one case of eczema of the hands, in a mason aged thirty-three years, which had existed for ten or more years, it was used with excellent effect. He had been treated by me with other measures for six months with varying success, and when this method was commenced the skin on the backs of both hands was very greatly thickened, even to three or four times the normal; the surface was hard and scaly in some places, moist and cracking in others. He was first given a strong potash solution (one drachm to one ounce), with which the surface was well rubbed once or twice, and covered with the diachylon ointment of the Germans. This caused great swelling, which subsided, leaving the parts somewhat less thickened. He was then directed to rub in the common soft-soap well, night and morning, and cover the hands as before; and after a short time the friction with which it was applied was increased until he came to using an ordinary scrubbing-brush, such as is used for the floor. Dipping it in soft-soap, the back of each hand was scrubbed—the palm resting on a table—till the opposite arm and shoulder were tired. The result was that at each visit a marked diminution in the thickness was noticed, and in three weeks the skin was reduced to

almost the normal thickness, and his hands better than they had been for ten years. This is an exaggerated case, but is of value, showing how far the stimulating treatment may be pushed with advantage; whereas, on the contrary, ninety out of one hundred of the ordinary run of eczema cases would be greatly aggravated by such means.

In one case of eczema of the scrotum I obtained very excellent results from the repeated application, by means of a camel's-hair brush, of the compound tincture of benzoin. The man ceased attending before the thickening had entirely disappeared, and the ultimate result can not be stated with certainty; but it is probable that the disease was cured, as the remedy was the first one tried by me, and the relief and satisfaction expressed by the patient was very great.

Quite a large share of the cases of ordinary eczema of various parts was treated by the oxide-of-zinc ointment, very generally in conjunction with some internal medication, depending upon the state of the patient. Many of this class are the constant subjects of dyspepsia, and the rhubarb-and-soda mixture was very commonly used. I frequently add Fowler's solution to it, giving of the latter three or four drops with a tea-spoonful of the former. Many of these patients require tonics, and the ammonio-citrate of iron and compound tincture of cinchona were generally used. Acute lichenous eczema I frequently treated with Startin's mixture of sulphate of magnesia, sulphate of iron, aromatic sulphuric acid, and gentian. Acetate of potassa, alone or combined, was used somewhat, and in my hands has done much for eczema.

2. *Acne.*—Acne appears second on our list in point of frequency, and we are quite willing to accord it that place so far as the annoyance to the patient (and ofttimes the physician) is concerned. Although acne belongs rather to those of luxurious habit, it is not an uncommon affection among the poor of this city, and especially those who lead indoor lives; hence it is that by far the larger number affected

are females (although it is true that, it being more a matter of vanity and not a disease affecting the welfare of the patient, males pay less attention to it).

There appear in our statistics one hundred and eleven cases of acne, of which sixty-nine were females and forty-two males. This is the largest proportion of any report of poor-practice with which we are acquainted, except in the Boston Dispensary for Diseases of the Skin, for 1874, where the ratio is a trifle larger. Among the poor of Glasgow * the proportion is only about one twenty-fifth of the whole; that is, but about one half the frequency which we have recorded; a fact due, as we suppose, to the more outdoor life of the Scotch, their plainer habits of living, and perhaps their national fondness for oat-meal. Certain it is also that the almost universal habit of frying much of the food, together with the great use of potatoes and the over-indulgence in tea, are prolific sources of acne with us.

Under acne I include not only the well-known papular and pustular eruption on the face, but also the erythematous form; the acne rosacea, which Wilson has attempted to isolate with the name gutta rosea; also the functional disturbances known as comedo, or acne punctata, and seborrhœa, or acne sebacea. The one hundred and eleven cases presented the following varieties: acne sebacea, 12; acne punctata, 8; acne molluscum, 1; acne simplex, 40; acne indurata, 22; acne rosacea, 28.

The acne simplex is decidedly a disease of adolescence. The youngest persons in whom it was observed were in two girls aged fourteen; two boys aged fifteen were recorded also with this form. During the five years, from fifteen to twenty, thirty-five cases of acne applied for treatment, and twenty-nine from twenty to twenty-five years of age; thus making the total number before twenty-five years of age sixty-six, and after this period but forty-five.

* McCall Anderson—Treatment of Diseases of the Skin, 1872, p. 7.

It is not easy to make out the causes of disease among this class of patients, as the time given for treating them is very limited, and the notes made are often hurried. A large share of the cases, however, depended more or less directly upon the occupation, habits, and diet of the patient. Very many were directly associated with constipation and dyspepsia, as I have elsewhere shown,* and a few doubtless with uterine derangement, as many of the symptoms were often complained of; but no uterine examination is possible in this run of practice. To my mind it is useless to call this acne by the name *juvenilis*, and attribute it to sexual development; for, although it most certainly occurs very frequently during this period, on the other hand multitudes pass puberty without its appearance, or if it does occur it is of mild form and short duration; the changes in the skin occurring at puberty undoubtedly predisposing to it, but the disease does not appear in its rebellious form without some other exciting cause.

The oldest patient with acne rosacea was a man aged fifty-four. There were quite a number of cases of acne sebacea in old persons, the oldest person being a man aged sixty-six. The nose is the most common seat of the dry, almost horny, secretion, forming crusts reaching down into the sebaceous glands. These latter cases are very difficult to cure. The best treatment is the repeated application of an alkaline wash (as of caustic potash, five to ten grains to the ounce), and the after-use of some slightly stimulating ointment, applied in very small quantity.

Very many of the acne patients were benefited by the internal administration of acetate of potassa (fifteen grains three times daily, well diluted) on an empty stomach; but the effect of this must be followed up by tonics. Arsenic, in my experience, is of but very little use in acne. I have during the past two or three years employed quite largely

* American Practitioner, December, 1872.

the plan of treatment suggested by Gubler, of Paris—namely the internal use of glycerine in doses of from one to three o four tea-spoonfuls three times a day, after eating—and wit good results. At first I colored and flavored it, but latterly have given the citrate of iron and quinine in it, which effect both, and assists its tonic action. This plan is especiall suited to those whose skins are greasy or muddy-looking with many comedones. I have had it fail repeatedly in th rosaceous form.

Locally most of my patients used hot water with goo results, and I have prescribed more largely than any other lotion containing one drachm of washed sulphur, four drachm of sulphuric ether, and three and a half ounces of alcohol, an with very generally good effect. I have rarely employed th bichloride of mercury in washes, but sometimes the wel known wash of sulphur, camphor, and water.

3. *Syphilodermata.*—It is a sad fact that third on our li as to frequency of occurrence come the cutaneous lesion produced by syphilis; and sadder yet, that of the ninet eight cases of this which were recorded seventy occurre in females to twenty-eight males. Syphilis thus gave ris to nearly ten per cent of all the cases of skin-disease. Th does not include the primary sores, they seldom, if ever, a pearing in this class. This percentage is much greater tha that given in most other statistics; thus in McCall Anderson ten thousand dispensary patients but a trifle over five per ce of the diseases were of specific origin; at the London Ho pital for Diseases of the Skin only about five per cent; at S John's Hospital for Diseases of the Skin only about three p cent; at the Boston Dispensary for Diseases of the Skin t proportion was about seven per cent, and at the Philadelph Dispensary about eleven per cent.

The majority of the cases were those of the later ma festations of syphilis, the earlier or macular eruption appearir more seldom. Thirty-one were recorded as having tubercul

syphilis, many others noted as having merely tertiary symptoms. There were no new cases of infantile syphilis recorded during the year, but there were a number under treatment, entered on the books toward the close of the preceding year. Although but little can be learned from the ages of these patients, inasmuch as many of the cases suffered from the initial lesion many years previously, it may not be uninteresting to note that the youngest applying was aged thirteen, a girl; also other girls aged sixteen and seventeen; the youngest male being seventeen; the oldest person was aged sixty-one; sixty-six of the ninety-eight were between twenty and forty years of age.

There were five cases of the squamous syphiloderm of the palm of the hand, often wrongly called palmar psoriasis. Some of these were of long duration, and had been treated locally elsewhere with no effect, but yielded promptly and perfectly to the internal administration of specific treatment.

One very remarkable case of dactylitis syphilitica occurred, which was shown at the New York Dermatological Society, and recorded in the Archives of Dermatology for October, 1874. The boy was aged sixteen, and the disease, which had lasted almost from infancy, had produced great deformity of both hands and feet, some of the phalanges seeming lengthened and others shortened, and the skin was marked by many cicatrices, and in some places there were ulcerating portions covered with scales and crusts. The disease had been considered scrofulous formerly, and the boy had taken cod-liver oil most of his life, with but little benefit. Very prompt improvement in the parts still undergoing active change was obtained by the mixed treatment. The disease was probably congenital.

Another remarkable case of probably hereditary syphilis was also under treatment, in a fine-looking married woman, aged twenty-four, who had been affected with a tubercular cutaneous lesion since about seven years of age. On the

forehead were two well-marked depressions left after node and on the forehead, lip, cheek, and back there are still re mains of the eruption. She has improved more under th treatment of mercury and iodide of potassium than under an she has previously had, and the large tubercular syphilic covering the whole of back of the shoulders, which wa ulcerated and crusted when first seen, has healed.

Certain cases have proved most rebellious to treatmen In one woman of forty-three years a gummy tumor of th right elbow has resisted every measure, has ulcerated int the joint, the bone has necrosed, and the arm has been usele for many months. The patient is irregular in attendance, very poor, and all the elements of the case are unfavorabl In one case of tubercular eruption about the right chee and nose but little change was effected by internal treatme until the local application of the oleate of mercury (ten p cent), when rapid improvement took place for a while, b the masses are again stationary. One patient, a woman age fifty-three, with dactylitis of the right large toe, retained h disease for many months. Ulceration occurred from frictio the joint appeared to be opened (but was not probed), but th ulceration healed again, leaving the joint still much enlarg when last seen.

In another woman, aged forty years, eczema was a ve troublesome complication of syphilis. She had an ulcerati tubercular syphilide of the sole of right foot, and shortly aft the administration of the mixed treatment on several occ sions the leg and other portions became so severely affect with eczema that treatment had to be suspended, as the troub increased as long as it was persisted in. So it was necessa to alternate the treatment as one or the other disease gain the ascendency, until finally the syphilide was healed and on a little scaly eczema left. On one occasion the whole bo was affected, red, hot, and rough, and afterward desquamat abundantly, leaving in some places moist eczema. I suppo

it was owing to a peculiar susceptibility to iodide of potassium, which I have known to induce eczema in other cases.

In another case, of a man about thirty-five years of age, a thickened patch of chronic eczema improved very rapidly and satisfactorily under a specific treatment given for a papular syphilide, but did not disappear entirely until a local application was made. ' Such cases are sometimes called syphilitic eczema, wrongly I think, for I have yet to learn that a true eczema can be produced solely by syphilis.

One patient, aged fifty-one, presented the peculiar and somewhat rare disease described by Van Buren and Keyes as chronic circumscribed inflammation of the erectile tissue of the corpora cavernosa. He came first for the treatment of a slightly ulcerating tubercular syphilide on the right buttock, and great general prostration. He had no other symptoms, and gave no other syphilitic history or of any primary sore certainly within the previous ten years; but shortly after being first seen he had diffuse syphilitic orchitis, which disappeared with the cutaneous lesion after a few weeks' longer treatment. Shortly after the occurrence of the testicular trouble I noticed the hard patch deep in the texture of the penis, on its upper surface, causing deviation on erection. The case was shown and examined at the New York Dermatological Society, and the disease recognized completely. There was a hard plate, of cartilaginous feel, about half an inch square, occupying about the middle of the dorsum of the penis, situated evidently in the corpora cavernosa; the skin was freely movable over it. The disease has lasted to the present time, six or seven months, and has rather increased than diminished. He has taken syphilitic treatment all the time, and kept the oleate of mercury (ten per cent) applied.

The treatment in most of my cases has been the bichloride of mercury (one thirty-second of a grain) with from seven to fifteen grains of iodide of potassium in mixture, with tonics,

thrice daily. I have combined the carbonate of ammonia wit
the potassium in many cases, with rather better results tha
from the iodide alone. Inunction was but seldom used.

4. *Phthiriasis and Scabies.*—Animal parasitic diseases als
formed nearly one tenth of the whole number of our case
Of the ninety-three present fifty-seven were due to the vari
ties of pediculus, or louse, and have the name *phthiriasis*
and thirty-six to the acarus scabei, forming *scabies*, or itc
These diseases, preventable by cleanliness, are, I am glad t
say, very much less frequent here than in Scotland; f
McCall Anderson states that scabies forms fully twenty-fi
per cent or one fourth of the whole number of skin-patien
among the poor in Glasgow, and Milton over eighteen p
cent at the St. John's Hospital for Diseases of the Skin
London. It is to be hoped the proportion here will be ev
more lessened as intelligence and sanitary knowledge pervad
the community.

The varieties of phthiriasis were as follows: phthirias
capitis, 24; corporis, 20; not stated, 11; pubis, 1; phthiri
phobia, 1. Of the fifty-seven cases thirty-five were femal
and twenty-two males. The statistics as to the first variet
affecting the head, are interesting as to probable causatio
Twenty-three of the twenty-four occurred in persons und
twenty years of age; and of these twenty-three nineteen we
in females, owing probably to the longer hair, the numb
and kind of articles used for adornment, and the greater di
culty in combing it when once infected. The *plica polonic*
the nature of which was so long a mystery, is nothing more
less than hair matted together by uncleanliness, and allow
to become the home of both animal and vegetable parasit
Happily this condition is very rarely seen in this countr
none of these cases even approached to it. Body-lice are
very frequent accompaniment of poverty, and the cases he
recorded (twenty) give no idea of the frequency of the con
tion, as but few of those suffering from them apply for reli

knowing its uselessness under the existing circumstances. Occasionally over-scrupulous persons become infested with the *idea* that they are suffering from body- or head-lice, when really perfectly free from them, to such a degree as to cause themselves much mental distress and the physician much annoyance. One such case was recorded under the name *phthiriophobia.*

Our common method of treatment of the head-lice among the poor is to soak the head well for twenty-four hours in kerosene-oil, which destroys all the bugs and their nits; then wash the head well with soap and warm water, comb it out, and saturate it with cod-liver oil till all the sore places are healed. This treatment is very rapid and very sure, three or four days or a week at most serving to heal all excoriations. Or white precipitate or citrine ointment, diluted two or three times, applied from the first, will answer in many cases, and is perhaps the best in private practice. Its value is increased by having it highly scented with rosemary or some other volatile oil. For lice of the body we generally use a combination of one drachm of caustic potash and two drachms of carbolic acid in four ounces of water, using it diluted once or twice at first, directing also the clothing to be sprinkled with it. To make the cure of any of these forms permanent the clothing must be either boiled or baked for a long time, also the bed-linen, and often the bedding itself requires attention.

Of the thirty-six cases of *scabies*, twenty-one occurred in males and fifteen in females, and twenty-six of the entire number in persons under twenty years of age. In several persons older than twenty years it could be directly traced to contagion in the family or to the occupation. Thus, one old man of sixty with scabies was a shoemaker, and contracted the disease in all probability from children's shoes which he was mending; for we know that the feet are very commonly affected in this disease in children. Another man,

aged twenty-seven, was a rag-carpet maker, an occupatio fraught with danger from many infectious diseases. In on family five were affected, aged respectively ten months, four six, eleven, and thirteen years; in another family four mem bers had the eruption.

In older persons the disease was treated with sulphu ointment, with the addition of a little carbonate of potash In younger patients, with more tender skins, the liquid stora or balsam of Peru, in ointment, was used, with equally goo if not better results.

5. *Psoriasis.*—The cases of psoriasis, fifty in number, wer pretty evenly divided between the sexes, twenty-seven female to twenty-three males. The youngest patient was nine year of age, a boy; the oldest seventy, also a male, and another cas of a man aged sixty. Many of the cases were of great dura tion; one case is noted as having lasted twenty-four years i a woman aged thirty-nine, another eighteen years in a woma of thirty-seven; of course, with exacerbations and remissions the case of the man aged seventy was recorded as psorias inveterata, but no duration is stated.

Most of these patients were treated largely by loc measures alone, because of the well-known obstinacy of th disease and the frequent neglect of treatment, whereby muc that had been done would often be wasted. The preparatio of tar, *liquor picis alkalinus*, or Hebra's compound tinctu of green soap and oil of cade, were principally used, wit diluted mercurial ointments. In many of the more rece cases arsenic and alkalies were given, but no conclusio as to results can be drawn. I have obtained, however, ve marked effects from the internal administration of tar an potash as combined in the *liquor picis alkalinus*, which w have so often presented to the profession * (picis liquidæ, ʒi potassæ causticæ, ʒj; aquæ, ʒv), giving from fifteen to thir drops, largely diluted, on an empty stomach. It has the dire

* Archives of Scientific and Practical Medicine, Feb., 1873 (Brown-Sequard's

effect of diminishing the cutaneous congestion and lessening the scales. When long-continued it may disagree with the stomach, but it is a remedy of value when others fail. Three of the patients with psoriasis—two males, each aged forty, and one female, aged forty-four—had acne rosacea. No necessary connection between the two diseases is known. In none of the cases of psoriasis which came under my observation were the tongue or lips affected; all were examined, I believe. I mention this as some have intimated a connection between the lesion known as *psoriasis linguæ* and this disease.

6. *Tinea.*—Forty-eight patients—twenty females, twenty-eight males—affected with diseases caused by vegetable parasites were recorded, and are thus divided: *First*, those due to the parasite *trichophyton*—(*a*) tinea tonsurans (ring-worm of the head) 10, (*b*) tinea circinata (ring-worm of the body) 21, (*c*) tinea sycosis 2, total 33; *second*, that caused by the *microsporon furfur*—the tinea versicolor, 9; *third*, that due to the *achorion Schönleinii*—tinea favosa, or favus, 5; *fourth*, of uncertain origin, onychia parasitica, 1. Tinea tonsurans is emphatically a disease of childhood, all of the ten cases occurring in patients fourteen years of age or under—three girls, seven boys—while an equal number of ring-worms of the body were seen during the same period of life—six girls and four boys—the oldest being thirteen years. The oldest person with this form of disease was a woman aged forty-five.

Tinea versicolor is stated by McCall Anderson to occur as frequently in males as females. Of our nine cases seven were the latter and but two males; but this number by no means indicates its frequency, as it is of such slight importance that patients do not often apply for its removal. I well remember its frequency among miscellaneous patients when hospital *interne*, and when serving in other dispensary classes. It seldom attacks children or those past middle life.

Five cases of favus were recorded during the year. The disease is rare in this country as compared with Europe.

McCall Anderson gives over fifteen and a half per thousand or more than three times the proportion here observed.

It will be noticed that I have not included among th vegetable parasitic diseases the *alopecia areata*, which ha been thus classed by some with the name tinea decalvans and ascribed to a parasite *microsporon audouini*. One case o this occurred; but as I have repeatedly and always searche in vain for the supposed parasite, and believe the weight o evidence to make it a neurosis, I place it with the other form of alopecia.

As to the treatment of the vegetable parasitic diseases, trust very much to sulphurous acid; but since this is difficul to get and keep strong in dispensary practice, many of th cases were treated with mercurial ointments, properly dilute I have also used with success the oleate of mercury (te per cent), likewise the *liquor picis alkalinus* in ointment (on drachm to one ounce). I object very much to the use of th bichloride-of-mercury wash after the fatal case from its use i England a year or so since. Any preparation must be ver thoroughly applied in order to be effectual, and I generall recommend frequent and thorough washings with soap fir in all this class of affections. In the tinea versicolor th carbolic-acid-and-potash wash mentioned under phthirias is very effectual. I have recently learned of success in rin worm from the local use of castor-oil, a very few applic tions sufficing for a cure. I have not tried it, but shall o so, for every new remedy of value added to our list is a gre acquisition.

7. *Urticaria.*—Of this disease there were recorded fort two cases, twenty-nine females to thirteen males. I feel th little can be added from these cases, as they are mostly acu attacks, and the patients were generally seen but once twice. One case of periodical urticaria, occurring at sev o'clock every evening, was arrested by quinine, about t grains, given an hour or two before the expected attack.

8. *Scabies.*—This, the next most frequent disease, has been already noticed with phthiriasis, section 4.

9. *Pruritus.*—Pruritus, among the poor especially, is such an uncertain disease, due to so many causes, that the teachings from those recorded at Bellevue are rather unsatisfactory. Thirty-two cases were noted, twenty-three females and nine males, of which eight were put down as pruritus senilis, three of the vulva, one due to pregnancy, and in twenty nothing is stated save the diagnosis pruritus. It is probable that very many were due to lice, although none were found, or their traces, in the examination given.

10. *Erythema.*—Besides the erythematous stages of eczema at its beginning and ending, there were twenty-five cases—eighteen females and seven males—recorded as distinct erythema, classified as follows: erythema of the face and nose, 11; erythema multiforme, 2; erythema papulatum, 2; erythema papulatum et nodosum, 1; and in nine cases simply erythema. Erythema of the face and nose, unconnected with any other disease, is not very uncommon, though among the poor comparatively few apply for its relief. In McCall Anderson's statistics of private practice the different varieties of erythema together formed one tenth of the whole thousand, though it was far from being as frequent with Mr. Wilson.

Several cases of multiform erythema were seen in young Irish girls just after landing, a disease which I have repeatedly met with under similar circumstances in other dispensaries. They are undoubtedly the result of the disturbed condition of the digestive functions, assisted by neglect of cleanliness, so common under these circumstances. These cases usually yield very promptly to a mercurial purge and the mixture of sulphate of magnesia, iron, acid, and gentian before alluded to. Two cases of erythema papulatum were observed, and one in which this form was associated with the erythema nodosum. In this latter case some rheumatic symptoms were also present.

11. *Herpes.*—Twenty-two cases were recorded as herpes—twelve females, nine males, one sex not stated—of whic twelve were cases of herpes zoster or zona, seven were o the lip, two the face, and one the tongue. Of the cases c zoster, two affected the leg and one was brachio-thoracic the youngest patient was a boy two and a half years old, th oldest a woman of fifty; two others, boys, aged seven an thirteen respectively, were attacked; five of the twelve wer females, seven males.

12. *Ulcers.*—Most of the cases of ulcers were of the lowe extremity, and the result of varicose veins. The cases wer in the main intractable, owing to the weak condition of th patients, the necessity of their standing on the feet most c the day, and their neglect of treatment. None of the radica methods of treatment were employed—such as incisions i and around them, tying the varices, etc.—because the case did not seem to warrant it. The number of ulcers noted those from syphilis not being included, was twenty, occurrin in fifteen females and five males. The youngest was a yout of nineteen, with varicose ulcers; the oldest a man of sixty five, with the same trouble. Twelve cases of the twenty wer included between the ages of thirty and forty.

13. *Furuncles.*—Nineteen patients—nine females and te males—were entered on the book with furuncles (one of ther was carbuncular). The ages ranged from three to sixty years I have relied a good deal on the hyposulphite of soda, half drachm thrice daily, in cinnamon-water, largely diluted, on a empty stomach, as recommended by McCall Anderson, an have had repeated evidence of its very great value in checkin the suppurative action. The rhubarb-and-soda mixture answer also very well, and was given to many patients. Sometime cod-liver oil acted better than any other remedy.

14. *Dermatitis.*—The cases which can properly be classe as dermatitis were few in number—fourteen—nine of whic occurred in female and five in male patients. Two were du

to the irritation of the rhus toxicodendron, one to fire, one to a cantharidal blister, two to traumatism, and in eight the cause or variety is not stated or is not significant.

15. *Erysipelas.*—Erysipelas presented itself in thirteen patients, five females and eight males. Eight times it affected the face, once the head, once the leg, once the foot, and in two the location was not stated. The treatment varied with the case, and did not present any thing of special interest.

16. *Lichen.*—I can not agree with the German school in making but two kinds of lichen, the lichen scrofulosorum and lichen ruber. Clinically there appear a variety of cases of papular eruption, which never tend to become eczematous, but whose papules—red, acuminate, and firm to the feel—stand more or less isolated, itch excessively, and often resist treatment most unsatisfactorily. This eruption may be either acute or chronic, attacks chiefly the extensor surfaces, often the neck and shoulders; the acute form giving rise to burning pain and imparting a sensation of heat to the hand, the chronic variety only itching and feeling rough. We recognize therefore clinically three varieties of lichen: (1) lichen simplex, acute or chronic; (2) lichen ruber planus; and (3) lichen scrofulosorum. There were twelve cases—six females, six males—of lichen in the thousand, of which five were the acute simplex form, two the chronic simplex or agrius, one the lichen scrofulosorum, one associated with purpura, and in three the variety was not stated. The ages varied from eight to sixty-eight years, the majority of all the patients being between twenty-two and forty-five years of age. The treatment of the acute forms was soothing, of the chronic stimulating, with tar and mercurial ointments, as the citrine. The lichen scrofulosorum requires cod-liver oil.

17. *Lupus.*—But twelve cases of lupus were recorded, of which nine occurred in females and three in males. This accords with the experience of others, which makes lupus to be much more frequent in women than in men. But the

disease is not nearly so common here as in other countrie
our proportion of lupus to other diseases of the skin bein
only a little over one per cent; in Glasgow it is almost tw
per cent in dispensary and two and a half in private practic
Hebra's statistics give 1.66 per cent for lupus vulgaris alon
Wilson's private practice 1.55 per cent for both forms. (
the twelve cases two were of the erythematous variety, eig
of the vulgaris (one of these being of the exedens form), ar
in two only the term lupus was recorded. The younge
patient was the boy, aged sixteen, referred to below; th
oldest sixty-five years of age. One case of the ulceratin
variety, on the end of the nose of a boy aged sixteen, w
treated by Hebra's method with the points of nitrate of silve
and cured completely in three sittings. The disease has n
returned now after an interval of seven months. Most of th
cases were treated less actively, with varying success; mar
are soon lost sight of.

18. *Pityriasis.*—Of the eleven cases of pityriasis record
seven were in females and four in males; the youngest fi
months, the oldest fifty years of age. Inasmuch as the cas
were none of them seen by myself, I will reserve comments

19. *Prurigo.*—It is very important that correct ideas shou
prevail as to the use of the terms pruritus and prurigo; th
former a symptom in a large share of cases or a neuros
in others, and the latter, as has been well-defined by Hebr
a true cutaneous disease. This latter affection—consistin
of fibrinous papules deep in the cutis, the skin being gene
ally of normal color over them except when scratched, th
eruption developed principally on the extensor surfaces, mo
commonly on the thighs and legs first, with enlargement
the nearest lymphatic glands—this true prurigo of Hebra
seldom seen in this country. I have observed it but a fe
times, and not at all among the patients whose diseases a
here analyzed. I have made these remarks because I belie
the cases here recorded as prurigo were hastily so inscribe

and were in many instances due to the presence of pediculi or other cause, and that a share of them at least were only *pruritus*. There were nine cases—three females, six males—ranging from twenty-five to seventy years of age.

20. *Sycosis.*—Sycosis is another term requiring more careful definition. As is well known, it is a pustular disease of the bearded face, attended with the development of nodules, and is an inflammation of the hair-follicles, which in this situation are unusually large and deep, and provided with larger and more abundant sebaceous glands than many other parts. It is classed by Hebra and Neumann with acne. It is often the result of a neglected eczema barbæ, and is also often but a development of acne tubercles in these parts. The parasitic and non-parasitic sycosis should be carefully differentiated. The former—due to the presence of the trichophyton, and being but a modified tinea circinata—has been already considered. There were eight cases recorded as sycosis alone, the youngest patient being twenty and the oldest forty years of age. They were all supposed to be non-parasitic; but, microscopic examination being absent, that can not be determined with certainty.

21. *Purpura.*—Purpura occurred in seven patients—four females, three males—at ages ranging from thirteen to fifty-eight years. One was a case of purpura hemorrhagica and one of the rheumatic variety, known to some as *peliosis rheumatica*, but more properly, I think, *purpura rheumatica*. No connection could be established in the cases which I saw, either with dietary errors or sanitary violations.

I will not enumerate separately each of the remaining varieties of cutaneous disease which presented themselves, as the number of each was very small, and such a course would weary without instructing. I will only mention a few of the more interesting or unusual facts.

Four cases of *epithelioma*—two males, two females—were observed; one of the lip, one of the nose, one of the inner

angle of the orbit and the nose, and one at the junction o the ala of the nose with the cheek on the right side. Thi latter case, in a woman aged forty, was completely cured b one application of Marsden's mucilage, made of equal part of arsenious acid and powdered gum acacia, moistened wit water into a thick paste. This was spread on a piece of lin and pressed closely on the ulcer (Marsden spreads it o the sore itself), and after about twenty-four hours a poultic was applied till the slough separated and the remaining ulce healed. The disease has not yet returned after the expiratio of six months.

Three cases of *ichthyosis*, one of them of the sebaceou variety, were noted. Of the two of ichthyosis proper, on was in a female infant of seven months, the other in a ma of thirty-three years.

Hyperidrosis was treated in two cases, both affecting th feet; one a male aged sixty, the other a girl of sixteen. Th latter was quite promptly checked by the diachylon ointmen of the Germans, spread on linen and worn day and nigh changing it twice daily. Two weeks served to remove a the tenderness and arrest the excessive secretion. The cas occurred recently, and permanent results can not be recorde but the treatment has been well reported of by others.

Two cases of *pemphigus* occurred in female children, age three and four years respectively. They were seen but onc or twice. The disease was not syphilitic.

The only case of a *nævoid* character was an erectile tumo of the forehead, which was pedunculated, and was remove by a ligature.

One instance of *eruption from bromide of potassium*, admin istered for epilepsy, was seen in a young man aged seventee years.

A single case of *rötheln* was recorded in May of last yea in a girl aged nine years, just as the epidemic was drawin to a close.

An unusual instance of *scleroderma*, affecting both feet and the back of the right hand of a woman aged forty-five, was watched some time with considerable interest. The disease had been slowly increasing for about a year, from a slight stiffness, until walking became impeded, and going up and down stairs quite a painful exercise, owing to the thickening and hardening of the skin around the ankles. The case improved very considerably under the use of the constant galvanic current, locally and generally, but was lost sight of, and the result not known.

We have thus endeavored to contribute to the statistical inquiry in regard to skin-diseases, and to compare some of the more common affections as they appear among our lower classes with the same in other countries. We shall hope soon to present the same with reference to these affections in the higher walks of life. In our remarks on treatment we have desired simply to call attention to some of the principal measures which have been found serviceable in treating this class of patients. It is to be greatly regretted, while the poor are especially liable to skin-diseases, there is no proper hospital where they may be accommodated and treated by baths and other methods which experience has proved of service, and where the diet and sanitary surroundings would be such as would contribute to their cure.

ANALYSIS OF

SIX HUNDRED AND SEVENTEEN CASES

OF

SKIN-DISEASE,

WITH CASES AND REMARKS ON TREATMENT.

BEING A STUDY ON THE CASES OF DISEASE OF THE SKIN TREATED AT DEMILT DISPENSARY DURING THE YEAR 1875.

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1876.

A STUDY ON THE CASES

OF

DISEASE OF THE SKIN

TREATED AT

DEMILT DISPENSARY DURING THE YEAR 1875.*

The number of cases of diseases of the skin which have come under my care in the Demilt Dispensary during the past year, and which I propose to analyze in the present paper, is six hundred and seventeen; besides which fifteen other patients, with miscellaneous affections, were wrongly entered and subsequently referred to proper departments. I am stimulated to thus study disease, as we actually observe it, by the very favorable reception accorded to the "Analysis of One Thousand Cases of Skin Disease," which I had the honor to present to this society one year ago,† and also by the belief that those occupying public positions owe to the profession the record, at least, of the experience gained in them; and finally because, while rare diseases and new therapeutic measures are often made the subject of study and report, the more homely details of every-day conflict with diseases of the skin are seldom offered to the medical public.

As in my "Analysis" of last year, I shall first invite attention to a short statistical inquiry as to the relative frequency

*Read before the New York Medical Journal Association, January 21, 1876.

†American Practitioner, May, 1875.

of the different forms of cutaneous affections, and afterwa
speak more in detail of the different diseases and their trea
ment, introducing such cases as may seem appropriate a
as time and space will permit, touching also, as far as pos
ble, upon the influence of age, sex, occupation, etc., in th
production. I will here express my hearty thanks to m
clinical assistant, Dr. Robert Campbell, for his most faith
attendance at the Dispensary, and for the very great assi
ance he has rendered me in recording and analyzing t
cases, and also for the many clinical histories he has writt
out.

The cases of diseases of the skin are presented in t
tables:—the first, for easy reference, giving an alphabeti
list of the diseases and the number of instances of ea
together with the sex of the patients; and the second,
ranged in the order of frequency, showing also the variet
of each disease and with a column of percentage, in or
that these statistics may be readily compared with others.

I have adopted and endeavored to follow what I concei
to be the simplest as well as the most correct principle
nomenclature, namely, adhering as far as possible to t
Greek names of diseases for the primary term, while secon
ary terms and expletives are given in Latin.

In these tables I have endeavored, as much as possib
to simplify the study by accepting the more commonly e
ployed terms, and excluding any of doubtful meaning,
sycosis, ecthyma, etc.; and, indeed, during the past year,
entering the cases, it has been my aim, by accuracy of di
nosis and uniformity of nomenclature, to render the subj
clear and simple, both for those who have followed me in t
practice of the Dispensary, and for those who shall learn
it by means of this report. Moreover, many of the disea
which are usually accorded separate names, will here be fou
grouped together as varieties of other affections; thus ac
will be found to include seborrhœa, comedones, and the ro
ceous acne, now isolated from this class by some writers,
will be explained later; eczema embraces as varieties t

pustular and papular forms, which by others might be distinguished as impetigo and lichen; dermatitis represents inflammation of the skin from heat, cold, mechanical irritants and poisons, which lesions might, perhaps, be classified as combustio, pernio, excoriations, etc.; while all the vegetable parasitic diseases are grouped together with the generic term tinea.

TABLE I.

Disease.	Males.	Females.	Total.	Disease.	Males.	Females.	Total.
Abscessus	1	.....	1	Paronychia	1	.....	1
Acne	16	27	43	Pemphigus	.....	1	1
Anthrax	1	.....	1	Phthiriasis	21	36	57
Bromidrosis	1	.....	1	Pityriasis	.....	1	1
Chloasma	.....	3	3	Pruritus	7	4	11
Clavus	2	2	4	Psoriasis	5	15	20
Dermatitis	15	8	23	Purpura	.....	2	2
Eczema	110	108	218	Roseola	.....	1	1
Elephantiasis Græcorum	1	.....	1	Rubeola	.....	1	1
Epithelioma	1	.....	1	Scabies	15	11	26
Eruptio e potass. iodid	1	.....	1	Scrofuloderma	4	4	8
Erysipelas	10	9	19	Syphiloderma	22	17	39
Erythema	6	8	14	Tinea	8	13	21
Folliculitis capitis	1	.....	1	Ulcus	1	4	5
Furunculus	6	11	17	Ulcus erodens	2	4	6
Herpes	12	5	17	Urticaria	7	10	17
Hyperidrosis pedum	1	.....	1	Varicella	1	1	2
Keloid e cicatrice	1	.....	1	Verruca	9	1	10
Lichen	6	11	17	Xeroderma	.....	1	1
Nævus	.....	1	1				
Onychia	.....	2	2	Total	295	322	617

TABLE II.

Disease.			Number.
Eczema	Impetiginodes	63	218
	Papulatum	16	
	Intertrigo	1	
		138	
Phthiriasis	Capitis	45	57
	Corporis	12	
Acne	Sebacea	2	43
	Punctata	4	
	Molluscum	0	
	Simplex	26	
	Indurata	4	
	Rosacea	7	
Syphiloderma			39
Scabies			26
Dermatitis	Calorica	8	23
	Venenata	4	
	Traumatica	3	
		8	
Tinea	Tricophytina — Circinata	12	21
	Tricophytina — Tonsurans	2	
	Versicolor	5	
	Favosa	2	
Psoriasis			20
Erysipelas	Faciei	11	19
		8	
Furunculus			17
Herpes	Zoster	10	17
	Labialis	3	
	Præputialis	2	
	Nasalis	1	
		1	
Lichen	Simplex — Acutus	14	17
	Simplex — Chronicus	1	
	Pilaris	1	
	Planus	1	
Urticaria			17
Erythema	Faciei	3	14
	Papulatum	2	
	Multiforme	1	
		8	
Pruritus			11
Verruca			10
Scrofuloderma			8
Ulcus erodens			6
Ulcus			5
Clavus			4
Chloasma			3
Onychia			2
Purpura	Hemorrhagica	1	2
	Rheumatica	1	

TABLE II.—*Continued.*

Disease.	Number.	Per Cent.
Varicella	2	.3
Abscessus	1	.16
Anthrax	1	.16
Bromidrosis	1	.16
Elephantiasis Græcorum	1	.16
Epithelioma	1	.16
Eruptio e potass. iodid.	1	.16
Folliculitis capitis	1	.16
Hyperidrosis pedum	1	.16
Keloid e cicatrice	1	.16
Nævus	1	.16
Paronychia	1	.16
Pemphigus	1	.16
Pityriasis	1	.16
Roseola	1	.16
Rubeola	1	.16
Xeroderma	1	.16
Total	617	

These six hundred and seventeen cases, then, will be found arranged under forty-one principal heads, many of them embracing several divisions, while sixteen represent but single examples of the diseases recorded; in some instances the same patient was treated for two distinct diseases, and these are entered under their proper heads. The ratio of males to females was much closer than in the analysis of last year; of these, two hundred and ninety-five were males to three hundred and twenty-two females, or a trifle over four and a half per cent. in favor of the females, the proportion in the one thousand cases of last year giving the females the preponderance by fifteen per cent. The difference may, in part, be explained by the fact that the patients at Demilt being, as a rule, of a rather better class, mechanics and small storekeepers—the men have more time and inclination to attend to personal comfort than the poorer laboring classes composing the attendance at Bellevue. In Balmanno Squire's statistics from five thousand consecutive cases entered at the

British Hospital for Diseases of the Skin, the males were i excess by nearly seven and a half per cent.

About one-third of the entire number of cases—one hun dred and ninety-one—occurred in children of ten years an under; one hundred and nine of these being five years o less of age. The larger proportion of children, as compare with the analysis of last year, is due to the more careful sepa ration of patients and their allotment to the proper classes although very many cases of cutaneous disease in childre still find their way into the department of diseases of childre thus lessening the proportion with me. The ages belongin to the different diseases will be spoken of when considerin the individual maladies. No general deductions can be mad as to the influence of the seasons in the production of cu taneous disease from the cases here analyzed, other than t state that the largest number of patients were entered on th book, including those on the alternate days by my colleagu Dr. Donor, during the month of September, the smalle number in January, which gave but two-thirds the numbe recorded during the former month. The season of the ap pearance of individual diseases will be mentioned, as far a possible, in the proper place.

A smaller proportion of lesions due to syphilis were r corded than last year, namely, but thirty-nine in the six hu dred and seventeen, or 6.33 per cent. of the whole, agains ninety-eight per thousand, or 9.8 per cent. in the form analysis, the difference being due to the class of patient The percentage of animal and vegetable parasitic disease however, is greater, being about seventeen per hundre against fourteen in the former report; the discrepancy agai being due to the class of patients, because in the better rank these affections are more noticed and abhorred, where among the lower walks they are looked upon as a necessar part of their poverty.

The order of frequency of various affections of the ski differs considerably from that afforded by the former analysi of one thousand cases, showing that positive deductions a

to the relative preponderance of this or that disease can not be drawn conclusively, except from an average of very many such studies. Eczema still stands first in the list, as it ever will, in regard to frequency, and forms a trifle over thirty-five per cent. of all the cases, the percentage of last year being but 30.2; while acne, which before came second with a percentage of 11.1, gave here but 6.98 per cent.; psoriasis also appeared much less frequently, yielding but 3.24 per cent. in place of the five per cent. of last year.

On comparing the lists, it will be further found that fifteen names of diseases appear on that of last year which are not found on this, and twelve names occur in the present one which are absent from the former. Ecthyma, excoriations, and sycosis, are excluded from the present list by being entered in their proper places as phases or varieties of other diseases, while not a single case of the following, not very uncommon, diseases was recorded, namely, alopecia, ichthyosis, lupus, prurigo, and scleroderma. There were, however, several cases which casual observation might call lupus, but which close study discovered to be epithelioma or rodent ulcer, or else due to syphilis. The term prurigo I restrict wholly to the eruption which Hebra has described under that name, whose definition is accepted by most dermatologists; and I call those cases pruritus where itching exists as the only symptom, excepting, of course, any which are more properly classed under eczema, phthiriasis, etc.; and although I doubt not but that the term prurigo would have been applied by some to certain of the cases here analyzed, no single case of the true disease was observed. The twelve diseases appearing here and not in the former analysis, will be spoken of in due order. As far as I know but two patients died within the year, both infants—one, twenty months old, with purpura hemorrhagia; the other, four months old, with syphilitic pemphigus. In both of these patients the disease was far advanced when they were brought to the Dispensary, they being almost *in extremis*.

We will now proceed to consider some of the points in the

separate diseases which have come under observation, and will speak of them in the order of their frequency of occurrence.

1. *Eczema.*—Of the two hundred and eighteen cases of eczema, one hundred and eleven were in male and one hundred and seven in female subjects, giving a preponderance of four males; whereas in my former analysis the females were in excess by twenty-seven in three hundred and two, or about nine per cent.; other statistics agree in making the disease more common in males than in females. Quite a large proportion of the eczema cases were in children, seventy-one being five years old or under; of these seven were four and a half months or younger, fourteen from that to twelve months, and a total of thirty-nine from two years downward. Calling those cases of four years of age or under, infantile eczema, there were sixty-nine of this variety, or 11.2 per cent of the whole. This presents a striking contrast to the statistics published by Mr. Wilson,* who formulates his deduction by saying that the percentage of eczema infantile to eczema of the rest of life, is as one to sixteen; whereas here the proportion is nearly double that. He also asserts that the disease is more common in the male child; whereas among these children there were eleven males to ten females of one year old and under; up to three years of age, they stood twenty-six males to twenty-eight females; and at four years or under, the period which I have assigned as infantile eczema, there were thirty-five females to thirty-four males. Without wishing to depreciate Mr. Wilson's work in this field of statistical investigation, I would, by these figures, show the need of great care in formulating any rules or laws in regard to disease, for I can not suppose that these great differences are entirely due either to the country or to the class of patients.

It is, perhaps, interesting to note that of the two hundred and eighteen cases of eczema, seventy-one, or almost one third, occurred during the first five years of life, and one hundred and two, or nearly one-half, within the first decade; of

* Lectures on Eczema. London, 1870: pp. 265 and 275.

these one hundred and two cases, fifty-two were in boys and fifty in girls. These figures exhibit quite a contrast to those given last year, where the percentage of cases of five years and under was only 5.6 of the entire number of cases of eczema against almost thirty-three per cent. this year; and the average of those ten years and less was but 7.6 per cent. to over forty-seven per cent. in the present study. They contrast also yet more strongly with Wilson's statistics from middle and high life in England, where an average of two thousand gave but four per cent. for the first decade against our forty-seven per cent. for the same time of life.

It is also seen that the decade from twenty to thirty presents the next greatest number of cases of eczema. Balmanno Squire* has shown this period, between twenty and thirty, to exhibit proportionately more cases of cutaneous disease in general than any other in life, basing his calculations on a careful study of the census of London, in which those living at each period of five years are compared with the number of cases of general skin disease at the same ages, among five thousand skin cases at the British Hospital for Diseases of the Skin. Wilson's statistics further show eczema to be more common during this period than during the first decade, though with him that between thirty and sixty years yields a still larger proportion of cases, showing, as I remarked in my former analysis, that among the higher classes the elements of ill-health, due to over-indulgence and gouty disease, far exceed those existing among the poor with us; that is, while eczema, like all disease, must be looked upon as a lowering of vitality, in the higher classes of society this is due to over-indulgence and too little bodily exercise, together with the depressing influence of mental care; and that in this class of society these agents are far more productive of eczema than are the supposed elements of lowered vitality in the poor, under-nutrition and overwork. From these conclusions important therapeutic considerations are drawn, namely, eczema among the better classes yields better

*On the Influence of Age in the Causation of Skin Diseases. London, 1873.

have been required; for no disease of the skin exemplifies more than eczema the error of a routine habit of prescribing, and none exhibits more clearly the necessity of studying the case, and not simply ordering this or that accepted remedy irrespective of the particular requirements of the patient, or, as I have elsewhere stated, eczema requires management quite as much as treatment.

The treatment of eczema in children, of which we have seen that there were one hundred and two cases of ten years or less of age, offers a field of great interest for the study of the therapeutics of the disease. Every phase of it is here seen—acute, sub-acute and chronic, moist, pustular, squamous and papular; and the measures applicable to one form do positive harm in another. While, therefore, I can not discuss in full the treatment, I will mention a few of the more salient features of the disease as they have presented themselves in this clinic during the past year. I will not, however, reiterate points made in my analysis of the preceding year, and would refer those interested in the subject to that, as expressive of much that would be said at the present time did space permit. I have ordered poultices to the heads of infants with eczema very seldom (I believe but twice) at the Dispensary during the year, and then only a *single application* of the same, and that after the eruption had been left alone for a while, with only the repeated application of an ointment. The object of the poultice is to remove an incrustation; and after a single application over night, the head is to be washed in borax and lukewarm water, two drachms to a pint, no soap; and the appropriate ointment is to be reapplied as often as necessary in order to keep the parts thoroughly protected. I therefore order no more poultices nor washings, unless absolutely required; for, as a rule, the crusts which form afterwards will separate in a few days under the continued soaking with a soft ointment or cod liver or almond oil.

Last year I mentioned the use of tannin in ointment, one drachm to the ounce, as having given me good results; this year habit, perhaps, and the desire to test the value of differ-

ent remedies, has led me to employ largely the bismuth subnitrate in ointment, half a drachm or one drachm to an ounce; and with many skins it acts very much better than the zinc ointment. I have also returned, in a measure, to the employment of the old unguentum picis or tar ointment of the pharmacopœia, diluted two, three or even more times, either with simple or rose ointment, or in combination with oxide of zinc ointment, and I find that it does not merit the neglect into which it appears to have fallen. I have no new experience to add in regard to the tannin ointment before recommended; when used it has proved serviceable.

I have employed baths more than formerly in the treatment of eczema, both in children and adults, among the poor, and they have at times rendered great service. As is well known, the application of simple water to eczematous skin does harm, and is to be avoided as far as possible; but the same does not hold true in regard to water medicated so as to offer a soothing element, by means of the carbonates of potash and soda, borax, acetate of potash, etc., combined with starch.

In a case of eczema of the scrotum in a boy, which I have reported elsewhere,* very great relief was obtained by soaking in a warm bath every night in an ordinary wash-tub half full, with something over an ounce of carbonate of potash and about half an ounce of carbonate of soda, with four tablespoonfuls of dry starch boiled, and the subsequent application of the tar ointment diluted with twice as much simple ointment, cured the case, which had been most distressing and troublesome. The boy took, at the same time, a little arsenic in rhubarb and soda mixture; but the relief afforded by the local treatment was so immediate and certain that no doubt could be entertained of its very great value.

Acute and exuding eczemas do not as a rule do well in baths, at least in my hands; but many children with subacute and chronic forms of the disease, more or less general, were treated with baths similar in the main to the above with

* Archives of Dermatology, January, 1876, p. 155.

advantage. It must be remembered that after coming from a bath all the diseased parts must be dried with the least possible friction, which is best attained by throwing a warmed linen sheet around the body and drying by pressing this on the surface; and also equally important that diseased surfaces must always be covered immediately with some protective dressing, otherwise the effect of the bath may be irritating, having dried the skin more than can be remedied by the natural oiliness of the surface. In private practice, after a bath, the glycerate of starch or vaseline—the perfumed or "pomade vaseline" is most agreeable—may be applied to the entire surface if there is any tendency to general roughness or scaling, and furnishes a most elegant means of rendering the integument soft and supple.

In regard to the internal treatment of eczema, I find no reason to alter the opinions expressed last year as to the internal origin of a large share of cases, and of the consequent necessity of properly selected internal medication and dietary regulation.

I confess that I have been a little surprised, however, at the effects which I have obtained from arsenic in many cases. For the purpose of clinical study, I have given a large number of children no other treatment but arsenic, except occasionally a little zinc ointment as a placebo. I have given it to infants as well as older persons, administering it in increasing doses till some of the physiological effects were observed, though this limit was not always sought, and I have seen both impetiginous and dry eczemas disappear in a very short time. I regret that I can not, at the present time, give definite results from my experience, for I am not yet able to determine exactly in what cases this method will do good, and when it will be inert or harmful. I believe, however, that the effect of arsenic is much more marked in the eruptions of children than in adults, my previous experience in the latter having forced me to report much less favorably than has been done by certain dermatologists, notably of the English and French schools; but of its very great efficacy in certain cases of

amount of itching, I resolved to give arsenic and push it till good or bad results were obtained. Accordingly, the other treatment being suspended, equal parts of Fowler's solution and cinnamon water were prescribed; and four drops of this were ordered three times a day, the dose to be increased by two drops every other day until twenty drops three times a day were reached—the same local treatment being used, the ointment to be washed off with a solution of two teaspoonfuls of baking soda in a teacup of water, once daily. At this time the eruption was about in the state described as existing at the first visit, three and a half months previously, his general condition having improved but very slightly also under the oil and tonic.

In twelve days it was recorded that there was great improvement, and four days later (Sept. 16) still more relief; he was then taking twenty drops of the mixture, or ten drops of Fowler, three times a day; a large portion of the eruption had become papular, there were almost no excoriations; the child slept well and looked fifty per cent. better. The dose was then increased to thirty drops after meals, augmenting in the same manner two drops every other day. This dose being soon reached, it was continued at thirty drops, or fifteen of Fowler's solution of arsenic, three times daily, until December 4, three weeks longer, when it was noted that the eruption had nearly disappeared, the father stating that the child had never before been so free from the eruption since its inception. December 30, he still continues well. The father testifies that whenever the arsenic is omitted, even for a day or two, the itching returns. The dose of the mixture was then ordered to be increased to forty drops (twenty of Fowler) three times a day, the dose of thirty drops not having caused any inconvenience.

On January 15, 1876, it was recorded that the forty drops had disagreed with the stomach and caused vomiting; in order, therefore, not to withdraw the remedy entirely, the dose was lowered at once to ten drops three times a day, with instructions to increase slowly to thirty, a point at which

he had previously tolerated the arsenic perfectly. At his la
visit almost every trace of eczema had disappeared; the colo
of his cheeks was of a natural rosy hue and the skin the
smooth, the ears perfectly normal, and, but for slight papul
tion here and there, the disease could hardly be suspecte
He sleeps well and eats well. March 11, 1876, he remai
well.

To complete this history, I should state that the father is
decided asthmatic, and had eczema eighteen years ago; t
mother is healthy. The child had wheezing lately, that
before commencing treatment; it has improved with the i
provement in the eruption. There was no change made
the local treatment from first to last, and during the lat
part of the time this was rather neglected.

I have elsewhere* written strongly against the evil of fa
ing into the "rut" of treating eczema by means of Fowle
solution and zinc ointment, and mention the fact here to wa
any against believing that because I have given *a single c*
where arsenic proved *the* remedy, that therefore it is valua
and to be administered in every case of eczema. Far fr
it; the cases, in my experience, are comparatively few wh
anything like this effect can be obtained. In this child
believe it was indicated by the asthma of the father and slig
wheezing in the child; while the great amount of itchi
showed a nervous element which called for such a ne
tonic.

During the past few months I have been using a prepa
tion of arsenic but little known or used in this country, l
which I think bids fair to be far more useful than the w
known Fowler's solution. This is the solution of the ch
ride of arsenic, the liquor arsenici chloridi of our Dispen
tory—the old DeValangin's solution. Its advantages a
that it is better tolerated by the stomach, and that it can
administered in large quantities; and thus far, in public a
private practice, it has yielded results which I have failed
obtain from the more commonly employed forms of arse

* The Management of Eczema. G. P. Putnam's Sons, 1875.

The Dispensatory states that its strength is two-thirds that of Fowler's solution, but that it is to be given in the same doses. In one very old and obstinate case of eczema of the beard, in a man aged thirty, this preparation has been administered in doses of forty drops three times a day with the happiest results. He has been under treatment elsewhere for several years; and although persistent epilation and local remedies have done the most toward removing the disease, he still feels that when he omits the arsenic he has more irritation than when under its influence. He, of course, reached these large doses slowly, beginning with five drops after meals; he gradually increased by a drop or two a day to the full doses mentioned.

In pustular or impetiginous eczema, I have had very good success with the hyposulphite of soda, in large doses, thirty grains for an adult three or four times a day, largely diluted and given usually in cinnamon water, on an empty stomach. Last year I reported favorably of its employment in furuncles. I refer now to the more superficial suppuration of eczema. I think I have not used as much cod liver oil this year as last, the class of patients not requiring it, they being in the main better fed and less depressed and exhausted. I have, however, employed more acetate of potassa; indeed, as we rise in society we find, as I have before suggested, more need of two classes of internal remedies in treating many diseases of the skin, namely, evacuants or diuretics and nerve tonics; that is, we find more the results of over and wrong indulgence among those better able to procure luxuries, for which cathartics and diuretics are demanded, and we encounter also nerve exhaustion from responsibility and mental strain, which requires nerve tonics.

Infantile eczema was very generally treated after Mr. Wilson's plan, namely, a grain or two of calomel every day or two, or twice a week, according to the effect; and arsenic and iron, with a syrup internally, with generally a little compound tincture of bark to take the place of the wine. Cod liver oil was given to those of strumous habit.

2. *Phthiriasis.*—Second on our list this year, in point frequency, come the cutaneous phenomena caused by th presence of lice on the body, there being fifty-seven case exactly the number noted in the entire thousand of last yea when it stood fourth in order of succession. The reason, before stated, of the apparent greater proportion in the pre ent statistics is because these troubles are noticed more h the more cleanly classes; and rarely have I demonstrat their presence when the individual or parents have not e pressed regret or sorrow, and looked upon them as a sham Females were more affected than males, thirty-six to twent one—the preponderance being made up by the cases phthiriasis capitis in girls from eight to twenty years o where untidy habits foster the lodgment and multiplicati of lice in the head. The youngest patient in which this sta was found in the head was four years; the oldest, a wom of forty, who, with two girls aged twenty-one and twen two, were the only patients with this disease over twen years of age. Body lice were found in older persons fro forty to seventy-five years of age, and seldom if ever in ve young persons.

The treatment employed for the head form was always th described last year, namely, soaking three times in kerose oil within twenty-four hours; then washing thoroughly w castile soap and warm water, and applying afterwards c liver oil, if the head be very sore, or zinc ointment, or white precipitate diluted three times. I have used this p in private practice, and do not find that it is objected whereas the thoroughness and certainty of cure of a sin soaking renders it a treatment to be recommended. It k the nits and they become detached on repeated combi which does not happen when an agent has been used wh does not penetrate them. In private practice good resu are obtained, but not so quickly, by means of highly scen white precipitate or citrine ointment, diluted three tim and the nits may be separated by means of a wash of eq parts of acetic acid and cologne.

3. *Acne.*—This disease, which yielded 11.1 per cent. in our analysis of last year, gives now but 6.9 per cent. Of the forty-three cases treated during the past year, twenty-seven were females and sixteen males, which is almost exactly the ratio between the sexes found during the previous year. These forty-three cases presented the following varieties: acne sebacea, two; acne punctata, four; acne simplex, twenty-six; acne indurata, four; acne rosacea, seven. The early age at which acne is prone to affect the skin is seen from the following:

TABLE IV.

Age of Patient.	Males.	Females.	Total.
At 14 years of age	.....	4	4
At 15 years of age	1	3	4
At 16 years of age	.....	2	2
At 17 years of age	3	3	6
At 18 years of age	.....	3	3
At 19 years of age	2	1	3
At 20 years of age	4	2	6
20 to 30 years of age	3	3	6
Over 30 years of age	3	6	9
Total	16	27	43

At sixteen years of age or under there were ten cases, nine of which were females; after that period the sexes were about equally divided. The oldest patient recorded with acne simplex was fifty years of age, a period usually stated to be free from this form of acne. The youngest patient with the rosaceous form was a man aged twenty-three, the oldest a man of forty; of the seven cases, five were females and two males.

In regard to the causation of acne, a large share of the patients presented some of the manifestations of imperfect digestion, coated tongue, constipated bowels, flatulence or oppression after eating; although a first general question will commonly elicit the answer that these patients are perfectly

well with the exception of the eruption on the face. Most c the girls with the simplex and punctata forms worked in fac tories, went to school, or lived out as servants; and anothe year's experience convinces me more firmly than ever tha this disease is due to imperfect digestion, even though th results of it are not shown before they reach the urinar secretion, where, in place of the normal results of disintegra tion, we find urates, oxalates or phosphates.

The element of confinement to the house and want of fres air seems to be wanting in those of the male sex who wer affected with acne simplex and punctata; for we find amon them two laborers, a farmer, butcher, driver, plumber an carpenter. But when one studies the diet commonly em ployed, it will be found that many habitually transgress quality and quantity; and these are the ones prone to b affected with skin diseases and acne especially. Our peop need much education on the subject of hygiene and diet- topics sadly neglected in the teaching of the schools, lay ar medical, and which the practitioner has mainly to study ar develop for himself, and should instruct the patient in.

Quite a share of the patients with the simplex and pun tata forms of acne received acetate of potassa first, followe by tincture of the muriate of iron as soon as the new el ments of disease cease to form. I have also given glyceri internally, with citrate of iron and quinia dissolved in with good results to those with thick, doughy skins. La year I stated that arsenic, in my experience, was of very lit use in acne. I must modify this in regard to the DeVala gin's solution already alluded to, which I have used in ce tain cases with excellent results, which I hope to commu cate more in full at a later day.

Locally I have little new to offer at present, beyond wh was reported last year, except that certain cases I have fou to do well under citrine ointment, diluted three times, a well rubbed in at night. The first effect is stimulating a the face appears worse, when the treatment is to be su pended and returned to in a few days.

4. *Syphilodermata.*—Our fourth subject of study embraces the lesions due to syphilis, exclusive of the primary sores, of which we find thirty-nine cases, or 6.3 per cent., in place of the 9.8 per cent. of last year. In the former analysis the number of females was two and a half times that of the males, seventy to twenty-eight; in the present, the proportion was so far reversed as that there were twenty-two males to seventeen females. There were three cases of well-marked infantile syphilis, the youngest being a female child of six weeks, with the perfectly developed papular syphilide of infancy; another, four months old, with syphilitic pemphigus, which died a day or two after being seen; and another child, two and a half years old, who had first syphilitic pemphigus, and later a dactylitis of the left foot. A fourth case was recorded of a child, a year old, whose mother had tubercular syphilis, but whose only symptoms, while under observation, were a moderate anæmia and diarrhœa.

The youngest patient applying with acquired syphilis was a boy, aged seventeen, with the papular form; there were in all five of twenty or less years of age, all males. Last year I recorded as the youngest a girl of thirteen; the youngest female recorded this year was twenty-two years of age. The only patients with syphilis over fifty, were two men aged fifty-one and fifty-six respectively.

Many cases have possessed great interest. One patient, a woman of thirty-six, presented the very unusual lesion of syphilitic atrophy of the interosseous muscles of the right hand. The patient was plainly syphilitic, there being many cicatrices as well as still ulcerating tubercular masses on various parts of the body. The case has done fairly under treatment, mainly with the iodide of potassium, combined with applications of electricity. The hand was about useless when treatment was begun; she can now sew with a moderate degree of swiftness and comfort.

Another female, married, aged twenty-four years, presented with constitutional syphilis a very rare lesion, namely, inflammation of the bursa in front of the knee-joint, of which there

are a few cases on record, and upon which subject Dr. Keyes has recently read a paper before the New York Dermatological Society.* The knee was red and hot to the feel, and presented the aspect known as housemaid's knee, so that it was impossible for the patient to kneel upon it, the motions of the joint, however, being but slightly impaired. This has slowly yielded to specific treatment, principally the iodide of potassium.

A male syphilitic, aged thirty-nine years, with characteristic specific lesions on the left palm, tongue and leg, presented the peculiar and rare disease described briefly in my last year's Analysis as chronic circumscribed inflammation of the corpora cavernosa. The case was almost precisely similar to the one mentioned as occurring last year, and presented an indurated patch, deep in, on the dorsum of the penis, which, on erection, caused deviation backward with some pain, but otherwise offered no inconvenience, and was not sensitive even to moderate pressure. It was about an inch long and half an inch wide, with clearly defined edges, it feeling rather like a plate than like a rounded mass. It is not probable that it is due to the syphilis, as the same phenomenon has been observed in cases who have never had syphilis; and moreover it developed while the patient was under anti-syphilitic treatment, and has remained in spite of the same for many months. At last note it was found to be moving backward, as in the cases described by others.

In some instances the syphilis has resisted treatment in a very annoying manner. In one case, a young man, aged twenty-three years, received infection on July 4th, and came for treatment October 5, 1875, just three months afterwards. He was then covered from head to foot with a small papulo-tubercular eruption of medium size, involving the palms and soles as well; and in the latter situation the tubercles had ulcerated from pressure, so that walking was very difficult and painful. This eruption disappeared under treatment, but

* For full particulars of this and another case of mine, see Dr. Keyes's article. Am. Jour. Med. Science, April, 1876.

was followed by repeated attacks of deep inflammation about the insertion of the tendo Achilles, first of one foot, then of the other, seriously impeding locomotion, and by enormous double anterior cervical adenopathy, attending a very greatly diseased tongue, which resulted in suppuration of the glands on the right side. Mercurials have seemed to depress him greatly, and have been withheld from time to time to give way to mineral acids and tonics, large doses of carbonate of iron appearing to do him more good than any other remedy. Oleate of mercury, ten per cent. with morphia, has afforded most relief, applied locally to the swollen heels and to the enlarged glands.

In another case, a woman aged forty-three years, who contracted syphilis from her husband three and a half years ago, an ulcerative tubercular eruption persisted in spite of vigorous and varied treatment for many months, at least six. She had been under treatment previously, being a year in a hospital, and is covered with large and disfiguring cicatrices of former ulcerations, on the face, hands, arms, legs and body. While under treatment she had new developments of tubercular trouble, also mucous ulcerations of the tongue. She had likewise, during treatment, specific inflammation of certain joints of each hand, also osteal pains so severe as to deprive her entirely of sleep. The ulcerations finally healed under the local application of iodoform sprinkled on, and cod-liver oil and large doses of iodide of potassium have finally caused a cessation of the development of the disease, and a very manifest change in her general appearance, which was at first distressingly anæmic and depressed. From time to time she was given mercury, but it always seemed to rather do her harm.

In striking contrast to such cases many might be given where a few weeks sufficed to remove, or greatly benefit, tubercular syphilitic eruptions of various durations, the same principles of treatment being applied to both sets of cases.

During the past year I have made very considerable use of the cyanide of mercury, which certain persons have extolled

as the best form in which to use the drug. I have always prescribed it combined in the same solution with iodide of potassium, and have discontinued it in one case after another, because the patients did not do so well as I am accustomed to see them do with other remedies, and because it very commonly produced more or less stomach irritation. I gave it in one-sixteenth grain doses, and it may be that some decomposition took place giving rise to irritating properties. I can not find if those who have employed it gave it alone or with the iodide of potassium. I shall make further trial of it alone, or given at different times from the iodide, and hope to obtain better results.

Last year I said that I thought that I had obtained rather better results in syphilis, from the combination of the carbonate of ammonia with iodide of potassium, than from the iodide alone, as recommended by some English surgeons. I must now state that further experience has not confirmed this, and that I have abandoned it to return to the combination with iron which I have long used.

I have employed with benefit local mercurial fumigations, where the tongue and throat were the seat of syphilitic disease, and have also prescribed inunctions as adjuvants to other treatment, when a rapid action was desired.

5. *Scabies.*—A rather larger proportion of patients with scabies, twenty-six, or 4.2 per cent., against 3.6 per cent. of last year, was caused by the recent breaking up of the nursery on Randall's Island, as quite a large share of the cases occurred within the last few months, and either came directly from there or were the results of infection thence derived. There were but two persons with the disease over twenty years of age, and these were both married women, one of whom brought a child affected with it, whence the contagion. The youngest patient was six months of age, and eighteen out of the twenty-six cases were under fifteen years. The sexes stood fifteen males to eleven females, about the same proportion as last year. In four instances two members of the same family applied for treatment; no larger number was observed

in the same family. Many of the cases were in very scrofulous and debilitated children, in whom the acarus caused severe pustular eruptions, which required to be treated by emollient applications before the anti-parasitic remedies could be safely employed. For this purpose, the hands especially were soaked and wrapped in cod liver oil, which is in a measure inimical to the insects, as it mechanically hinders their breathing, while at the same time its soothing properties render it very grateful to the inflamed skin. Pure sulphur ointment was rarely used, because of the delicate skins generally found in those with the disease, but generally a little sulphur was used in combination with liquid storax and carbonate of potash, in ointment.

6. *Dermatitis.*—Under dermatitis I include inflammations of the skin distinct from eczema, furuncles or erysipelas, which are caused generally by extraneous irritating elements, but may be of internal origin. Thus, of *dermatitis calorica* there were eight cases, seven being caused by heat, being burns in various degrees, and one from cold, a frost bite. Of the variety *dermatitis venenata*, there were four cases, three from the rhus toxicodendron, two boys of fifteen and sixteen, and a girl twenty-one years of age, and one from an irritating liniment, applied for rheumatism of the knee, by a woman fifty years old. Three cases of dermatitis were of traumatic origin; and in eight others, the cause or variety was not stated or was insignificant. The total number was twenty-three, or 3.7 per cent. of the whole.

The indications of treatment vary of course with the case. For the poisoning by the rhus the black wash was employed, and carron oil later in one case.

7. *Tinea.*—The cases of vegetable parasitic diseases were twenty-one in number, eight males and thirteen females, and were thus divided: First, those due to the parasite *trichophyton*—(*a*) tinea circinata (ring-worm of the body) twelve cases, (*b*) tinea tonsurans (ring-worm of the head) two cases, total fourteen; second, that caused by the *microsporon furfur*, the tinea versicolor, five cases; third, that due to the *achorion*

Schönleinii—tinea favosa or favus, two cases. There was no instance recorded during the year of parasitic sycosis, nor of disease of the nail of parasitic origin. In regard to another disease, reckoned by some among the vegetable parasitic diseases of the skin, namely, *alopecia areata*, I do not believe in its parasitic origin, even if there were any cases to record, which there were not.

Of the dozen cases of ring-worm of the body, eight were in females and four males, most of them being in children; in one instance, a mother and child at the same time presented the disease. The two cases of *tinea tonsurans* were in children, a girl and boy, each six years of age, and one child with the circinate form had the disease extending from the forehead up on to the hairy scalp, where it took the form of tonsurans, with broken or nibbled hairs, a clear demonstration of the identity of what was formerly supposed to be two distinct affections. The four male cases were in boys, except one patient, who was a hostler, aged twenty-four years, and presented, with his ring-worm of the face, an eczema of the thighs; and although the scales of the latter were not examined microscopically, we can be pretty certain that the disease here was also of parasitic origin, as we know that the eczema marginatum of the thighs and scrotum is but a form of this trichophytic disease. He probably contracted both forms from horses, as we know both these animals and dogs are liable to have the disease, and contagion has been traced from them.

Tinea versicolor, the pityriasis versicolor, or chloasma of the breast, of older writers, affected five persons—three females and two males; the youngest a female of fourteen, the oldest a male thirty-one years of age. Fourteen is a very early age at which to see it. I do not remember ever having seen it earlier; nor is it often met with after fifty. This eruption is very frequently called syphilitic, and I not infrequently find patients who have been salivated for it. It is, perhaps, the most harmless of all the skin affections, purely local and removable solely by local means.

The two cases of favus, or *tinea favosa*, were in a woman of twenty-eight, and a boy of fourteen years of age. In the woman it had already lasted fifteen years, and several years in the boy; and will probably last many years longer in both, for they were very fitful in their attendance. I have never seen in this country the severe cases covering much of the scalp, as found in Scotland and Germany. The disease here is generally confined to a few isolated or grouped spots, as in both these cases, and gives the patient so little annoyance that they are generally careless about it.

In regard to the treatment, I have generally followed that mentioned in my last year's report, avoiding still the use of bi-chloride of mercury washes often recommended, because of the danger both of absorption, and also of having such a poison around where it might be taken internally by mistake.

8. *Psoriasis.*—Eighth in our list stands psoriasis, which I regard, from public and private statistics, to be a far less common disease than is usually supposed. There were but twenty cases, or 3.2 per cent., against five per cent. of last year's cases. As to sex of the patients, the females were three times the number of the males, fifteen to five. In age the patients ranged from seven years to sixty, as presented in the following:

TABLE V.

Age of Patient.	Males.	Females.	Total.
Under 10 years of age	.....	2	2
10 to 20 years of age	1	4	5
20 to 30 years of age	.....	6	6
30 to 40 years of age	3	.....	3
40 to 50 years of age	1	1	2
Over 50 years of age	.....	2	2
Total	5	15	20

The longest duration of the disease was fifty years, in a woman aged sixty, besides which there were cases of twenty-two, twenty, eleven, seven, five, and three years' duration

depressed scars, contrasting strongly with the brown skin of the rest of the arms. On the body the eruption left no permanent marks after its disappearance.

During the past year I have been using phosphorus in many cases of psoriasis, giving it in doses of one hundred and sixtieth to one-eightieth of a grain, in cod liver oil. Very good effects have been observed in a number of cases, a part of which must of course be attributed to the oil.

Another year I hope to report the drug used by itself, which may be conveniently and safely done in the solution recommended by Dr. Ashburton Thompson. I have once observed a most severe bilious attack, with jaundice, come on during the taking of the phosphorated oil, which passed away soon on ceasing the use of the same, and the administration of a cathartic and some mineral acid. But it was a warning by which I have profited, and now I generally omit the remedy every week or so, administering acetate of potassa in the interval, and with excellent results. Of course the permanent effect of this treatment can not be determined until a longer period of time has elapsed.

9. *Erysipelas.*—But little new can be said in reference to the nineteen cases of erysipelas which came under treatment. In eleven instances the face was affected, and in eight other parts of the body. Ten of the patients were males, and nine females. The youngest patient was aged six months, and had an erysipelas migrans following vaccination; and the oldest sixty-eight, a man with facial erysipelas.

10. *Furuncles.*—Seventeen patients were recorded with furuncles—six males and eleven females—presenting all the shades of phlyzacious inflammation, most of them in cachectic and scrofulous children. Some of the cases might be called ecthyma, but I have preferred to exclude that term, with impetigo, placing the superficial impetiginous eruptions, not involving the derma and leaving no scar, among eczema impetiginodes, while the deeper inflammations resulting in confined suppuration, with or without a central core, are classed as furuncles.

The hyposulphite of soda, given internally, thirty grains three or four times daily, largely diluted and on an empty stomach, has been my main reliance in checking the new formation of boils, as mentioned in my analysis of last year. Sometimes this fails, when large and repeated doses of quinia will pretty certainly do the work. The hyposulphite has failed entirely in those pseudo furuncles accompanying psoriasis and not infrequently found in the axilla.

11. *Herpes.*—By herpes I understand, with modern dermatologists, an acute eruption of vesicles, which may be reproduced in successive crops, the vesicles flattened and clustered together, the skin between being sound, and acknowledging generally a neurotic origin. I mean by this to exclude the herpes circinatus of older writers, which we now recognize as a parasitic affection, and which has already been spoken of as tinea circinata; excluding also the herpes iris, which is more properly an erythema, in which the congestion goes on to effusion and consequent vesiculation; likewise excluding all old terms, as herpes esthiomenos or lupus, etc. The forms of herpes met with during the past year embrace most of the varieties recognized, and the number of cases was as follows: Herpes zoster, zona or shingles, ten cases; herpes labialis, three cases; herpes præputialis, two cases; herpes nasalis, one; anomalous, one; total, seventeen. The disease is rather one of early life, as is seen by reference to

TABLE VI.

Age of Patient.	Males.	Females.	Total.
Under 10 years of age	2	2	4
10 to 20 years of age	5	2	7
20 to 30 years of age	2	1	3
30 to 40 years of age	1	.....	1
Over 50 years of age	2	.....	2
Total	12	5	17

Of the ten cases of herpes zoster, six were in males and four in females; six affected the left side and three the right, one not stated. The youngest patient with shingles was a girl of three years, the oldest a man of seventy-three; there were also a boy of four and a girl of four and a half years with the disease. Last year I reported the youngest patient to be two and a half years. It has been known in children from ten to fourteen months old (Neumann).

The case of herpes mentioned as anomalous, was in a young man, twenty-nine years of age, who, within a year, has had three attacks of a vesicular eruption, occupying the buttocks and backs of the thighs, with no eczematous tendency. In the second attack, which I saw at the commencement, there were erythematous circles with vesicles developed upon them, very distinct on the parts mentioned, some of them being almost bullæ. The two attacks came on soon after discontinuing treatment at my direction. The deep itching and burning were at times excessive. The disease yielded each time quite soon to arsenic, strychnia and iron, internally, though new crops of vesicles formed for a while.

I have employed phosphide of zinc in herpes zoster with success in relieving the pain, and in one instance aborting the development of the vesicles. It was given with extract of nux vomica, one-third of a grain of each five or six times a day.

12. *Lichen.*—Some writers consider the papular eruption, familiarly known as lichen, as only a form of eczema, and recognize but two forms of lichen—the lichen scrofulosorum and lichen ruber. This, as stated last year, I can not agree to, and the cases here recorded as lichen presented the papular appearance described by that name in older works.

There were seventeen cases thus entered—six males and eleven females—of which thirteen were of the acute form, one chronic or agrius, one lichen pilaris, and one of the rather rare affection lichen planus. The youngest patient was aged two and a half years, male; the oldest sixty-nine years of age. The internal treatment employed was fre-

hands, one the left leg, and in four the location is not stated. Most of them were very transient eruptions, due to digestive disturbances, and yielding quickly to proper remedies.

The total number, fourteen, gives about the same percentage as that noted last year (2.5), and stands in striking contrast to McCall Anderson's statistics, where erythema makes five per cent. of the whole number of dispensary cases, and ten per cent. in private practice; or the disease is twice as frequent in Scotland as here, among the poorer classes, and four times as frequent in those higher in society.

15. *Pruritus.*—Four of the eleven cases of pruritus were recorded as pruritus senilis, in persons of sixty years or over, where, with cleanly habits, there was the intolerable itching attending the senile changes in the skin, which Neumann has described. This state, of course, can be only palliated, but fortunately often that is all that is required, for, although the changes remain or go on, the itching varies with other causes. A lotion of carbolic acid and caustic potash in water—carbolic acid two drachms, caustic potash one drachm, distilled water eight ounces—has generally afforded relief. These cases are also benefited by cathartics and alkaline diuretics, as the urinary secretion is often scanty in these patients. A man aged thirty-three, with distressing pruritus ani, with no visible lesions, obtained very much benefit from the internal use of nitric acid, with a diluted white precipitate ointment used locally, after other measures had failed.

16. *Verruca.*—Ten patients with warts applied for relief, nine males and one female. One patient had a single wart on the ear, which was removed by ligature, another had one on the forehead, and the rest affected the hands. One servant girl, of seventeen years, with about twenty warts, attended very faithfully and obtained a perfect cure, by the application of nitric acid at the dispensary and acetic acid at home; and after the excrescences were removed, the thickenings at the old locations were rubbed with a strong caustic potash solution, one drachm to the ounce, and diachylon ointment, applied till the skin was smooth and natural.

17. *Scrofuloderma.*—Under this head were classed cutaneous abscesses and inflamed superficial glands in strumous persons, of which there were eight cases, equally divided between males and females.

18. *Rodent Ulcer and Epithelioma.*—Without attempting to establish here the essential differences between these two morbid processes, or even to assert that they are entirely distinct, I will merely mention the clinical phenomena which have characterized the cases which have come under observation at Demilt Dispensary during the past year.

There have been six cases, which I regard as rodent ulcer, affecting two males, aged respectively fifty-one and seventy-two, and four females, of fifty-three, fifty-three, sixty and eighty years of age respectively; and one case of epithelioma.

First of the case of epithelioma: the man, forty-one years old, a liquor dealer, had a typical epithelial ulceration of the lower lip, which was referred to the surgical department for excision. The appearances were those familiar to all, and need not detain us here. I may remark that these cases are usually sent at once to the surgeons, and so are seldom entered in my book.

In regard to the six cases of rodent ulcer, the two women, fifty-three years of age—both married, one a widow—had the disease for many years, one on the forehead, the other on the left temple. The ulceration had never been extensive, and when first seen each presented only a dry, hard, slightly scabbed patch, with edges a little elevated and the surface slightly moist when the crust was removed. In one patient the disease had traveled quite a distance, leaving behind it a depressed pale cicatrix. The one on the temple was successfully destroyed by Marsden's arsenical mucilage, used as described in my report of last year; the same was applied to that on the forehead of the other woman, but was tampered with and no results were obtained.

The female aged sixty had a patch about the size of a small penny in the center of the forehead, which had existed many years, increasing very slowly from a small wart-like

affair, which she would pick from time to time, when a slightly moist surface would appear and the scab soon reform. It has never ulcerated, because she has taken care not to irritate it; and when first seen it resembled somewhat a patch of chronic eczema, but careful inspection showed a cartilaginous hardness of the base, and an unevenness of the crusted surface, which, with the history, made the diagnosis complete. She was unwilling to have any severe measures taken, and no treatment was employed, but she was counseled to avoid trying any remedies short of destruction.

The old woman of eighty had three masses, one under the right eye, one on left cheek, and one on the forehead, which were scabbed; they had been there a number of years, and showed but little change from time to time. No treatment was adopted, because of her age and infirmity.

The man fifty-one years old was a gardener, and for twelve years had had a slowly ulcerating mass at the internal angle of the right eye, involving the canthus and reaching on to the nose. It was moist and slightly ulcerating, and he had kept it covered with simple cerate for several years, it now being a little larger than a small cent, with a rather longer diameter horizontally; the margins were hard and abrupt. The case was sent to the clinic from Dr. Smith, of Jersey City, only for consultation, and excision and cauterization were advised. I have recently learned that the disease was excised, but that the patient has failed in strength since. These cases about the eye should be operated on very early; when seen it was thought that the disease had progressed internally, and rather an unfavorable prognosis was given.

In the man of seventy-two, a laborer, three patches of dry, hard disease, of a character similar to that seen in the women, existed on the right and left temple, and also on the neck.

None of these cases suffered any pain from the disease; there were no enlarged glands. The woman of sixty complained of considerable itching. I may here state that in calling these growths rodent ulcers and not epitheliomata, I have followed the distinctions of the English surgeons Bro-

die, Paget, Moore and Hutchinson; the Germans have not yet distinguished the two apart.

19. *Ulcera.*—In the treatment of ulcers of the leg (syphilis excluded) I have employed the recently recommended lotions of hydrate of chloral, ten grains to the ounce, with success. I direct that they shall be kept wet with it during the day, and at night order either tar and zinc ointments, equal parts, or one made of the balsam of Peru, half a drachm or one drachm to the ounce.

The effect of the chloral has been plain, improvement taking place and ulcers healing after its adoption, which were stationary under other treatment. There were but five cases—four women and one man—recorded as ulcers, although many cases of eczema of the legs possessed this feature, and there were many other syphilitic ulcerations.

20. *Clavus.*—Four patients presented themselves with corns or callosities of the feet, two of which cases possess interest. One, a boy ten years old, had five upon the sole of the right foot, mostly on the ball, which gave him much pain and seriously impeded locomotion. He attended very faithfully, and the troublesome formations disappeared under the continued application of the unguentum diachyli of the Germans, covered with brown paper. A woman of forty-five years found very great relief to large callosites on the feet from wearing oiled silk, cut to fit the sole and lapping over about an inch on the side, worn night and day within the stocking. She was a washer and ironer, and the painful hardenings were due to her occupation.

21. *Chloasma.*—The pigmentary disease here referred to is quite distinct from the fawn-colored eruption found upon the breast, formerly called chloasma or liver spots, but which has been already described with title tinea versicolor. This latter is due to the presence of the vegetable parasite *microsporon furfur*, whereas in the affection in question there is no parasite, but the disease is simply an abnormal collection of pigment matter in the rete malpighii, which is the seat of the normal coloration in the negro, and of the physi-

ological discolorations of the areolæ and elsewhere in pregnancy. The appearances in the three cases here alluded to was that of brownish discoloration mostly of the forehead, in irregular sized and shaped patches, covering sometimes the entire surface and extending to within one-third to half an inch of the hairy scalp. They may also affect other parts of the face as well. The surface is perfectly smooth, there being no desquamation except under the action of irritants. These cases were all in females, and from its very common occurrence in this sex, and especially in those with uterine or ovarian disease, it has been designated by some *chloasma uterinum;* the same affection, however, is occasionally met with in men.

In the remaining nineteen varieties of cutaneous disease the numbers of the cases were few, and many of the diseases unimportant. I will, therefore, briefly note only such items as may be of interest.

Two cases of *purpura* only were entered; one of the rheumatic variety, called by some *peliosis rheumatica,* but more rightly purpura rheumatica, in a woman thirty years of age; and the other, of the hemorrhagic form, in a female child of twenty months. The latter patient was brought to the Dispensary in a semi-comatose condition, and lived but two days. The child had nursed nineteen months, had been prostrated by hooping cough all winter, and presented a most pitiable appearance, with otorrhœa and gangrenous ulcers of the mouth and about the ear. It had hemorrhages from the nose, and the movements from the bowels were dark as from blood.

A single case of *bromidrosis,* and one of *hyperidrosis* of the feet, were prescribed for; the former received a wash of salicylic acid, but the result is not known; the latter, the unguentum diachyli of the Germans, to be worn next to the soles during the day, a treatment recommended by Hebra first, I believe, and which I have long used and found generally successful.

The patient entered as *elephantiasis Græcorum* presented a most marked and striking example of this rare disease, which terminated fatally, and will be detailed in full, with another case of the same disease, on a subsequent occasion.

An instance of *cicatricial keloid* was recorded, resulting from old syphilitic ulcerations, and presented no unusual features. There were several on the same individual. No treatment was adopted.

But a single patient was seen with *nævus*. This was a female infant of three months, who had six bright red, vascular nævi; one on the back, one on the side of the trunk, one in the left groin, which was ulcerated; one on the left leg, behind, just above the ankle, and one on the forefinger of the left hand. All were on the left side of the body, and the left submaxillary gland was enlarged, suggesting some unilateral nerve disorder of central origin. No radical treatment was employed, and the child was seen but twice.

A rather unusual form of *pemphigus* was observed in a school-girl, seven years old, who exhibited the remains of a bulla, about half an inch in diameter, on the inner side of the right knee almost as far back as the popliteal space; and another perfectly developed, of the same size, above and in front of the former. This latter was intact, moderately filled with clear serum, and elevated to about one-fourth of an inch. The base was scarcely at all inflamed, nor was that of the former one, which had dried, having appeared three or four days previously. The second one was first noticed on the morning of the visit. This case corresponds to the *pemphigus solitarius* of writers.

In my attempt to present, as concisely as possible, a mirror of the practice in my department in Demilt Dispensary during the past year, it will be seen that I have studiously avoided any discussion of vexed questions, have hardly alluded to differential diagnosis, and have not mentioned the microscopic anatomy of any of the diseases noticed. These are all important in their way; but I have desired, in the

present paper, simply to add the results of American experience in the observation and treatment of diseases of the skin, and to excite, if possible, more interest in their study; for it is only with accuracy of diagnosis and well founded knowledge, based on careful clinical study, that they can be successfully managed. The material at the command of almost every one is much larger than is used or often imagined; and I feel that I have not said one tithe of what could, with profit and pleasure, be given from the experience of this single year in one institution. I have reported many of the cases elsewhere, and have yet an abundance of notes which are highly instructive to me, and that may at some time be of service to the profession.

In conclusion, let me urge the value and necessity of written records of disease as the surest basis of medical research. Were this more universally done, there would be less theorizing in medicine, and practice will become a science as well as an art in proportion as it is grounded upon recorded facts. I can especially assert this in regard to diseases of the skin, whose study is fascinating and whose treatment is proportionately gratifying. I would again appeal for interest in the establishment of a hospital for this branch of practice, where proper treatment can be administered, and where study can be prosecuted in a manner satisfactory and profitable to the profession.

ANALYSIS OF

SEVEN HUNDRED AND SEVENTY-FOUR CASES

OF

SKIN-DISEASE,

TREATED AT THE DEMILT DISPENSARY DURING THE YEAR 1876, WITH CASES AND REMARKS ON TREATMENT.

BY

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ANALYSIS OF SEVEN HUNDRED AND SEVENTY-FOUR CASES OF SKIN-DISEASE, TREATED AT THE DEMILT DISPENSARY DURING THE YEAR 1876, WITH CASES AND REMARKS ON TREATMENT.

During the year 1876 there have come under my immediate observation and treatment seven hundred and seventy-four cases of skin-disease in the Demilt Dispensary, and I deem it my duty to the profession and to the science of dermatology to put on record, as far as possible, some of the results of the experience gained there. I am the more encouraged thus to report the simple and practical details of dispensary practice in the (to many perplexing) field of cutaneous diseases, by the very flattering reception which has been accorded to the similar reports I have ventured to put forth of the two preceding years, 1874 and 1875;[1] this

[1] Analysis of One Thousand Cases of Skin-Disease. *American Practitioner*, May, 1875. Analysis of Six Hundred and Seventeen Cases of Skin-Disease. *American Practitioner*, April and May, 1876.

both in print in the journals and in letters of thanks, a
further inquiry from many with whom I was personally
acquainted.

It has been a matter of surprise to me that the dispen
ries of New York have not been used more for the purp
of clinical study and instruction; in the skin-department
Demilt there have been over thirty-one thousand new
tients recorded on the books, while the total number of
tients recorded in all the departments, during the past twen
five years, amounts to more than six hundred thousand. D
ing the past year nearly twenty-five hundred visits have be
made by my patients alone. In regard to the advantages
be derived from a careful study of the practice of a dispens
department, I think the faithful attendance and diligent att
tion of the gentlemen who have been members of my clas
in dermatology bear abundant witness, as also their repeat
assertions.

In the present "Analysis" I shall follow the plan adopt
in the two preceding ones, of making first a short statistical
quiry as to the relative frequency of the different forms of cu
neous affections, and afterward of entering more into detail
reference to the diseases presented, their variations, treatme
etc., illustrating where it seems best, by the introduction
such cases as may be of interest. Many cases have already be
published in the *Archives of Dermatology* and elsewhere; so
of these may be briefly alluded to a second time in the pr
ent article, either because their importance seemed to warra
it, or because of later developments, or to especially illustr
some portion of this study.

I have again to return my sincere thanks to my v
faithful clinical assistant, Dr. Robert Campbell, wi
out whose constant presence and aid it would hard
have been possible to secure the material for this and otl
reports.

The cases are presented in two tables, as before: in t
first, arranged alphabetically, the number of instances of ea
disease and the sex of the patients are detailed; in the seco
table the diseases are arranged in the order of their frequen

at this clinic, together with their percentage to the total number.

In recording the diseases I have still adhered to the course indicated in my last report, of endeavoring, as far as possible, to simplify dermatological nomenclature by using only well-known terms and employing always the same designations, which, when practicable, are the Greek derivatives for the primary names, and Latin for the secondary terms and expletives; for fuller explanation I must refer the reader to the former reports.

TABLE I.

Disease.	Males.	Females.	Total.	Disease.	Males.	Females.	Total.
Abscessus	....	1	1	Nævus	1	....	1
Acne	20	38	58	Pemphigus	....	1	1
Adenoma	2	....	2	Phthiriasis	40	53	93
Alopecia areata	....	1	1	Pityriasis	....	1	1
Carcinoma	....	1	1	Pruritus	8	4	12
Chloasma	....	2	2	Psoriasis	9	10	19
Dermatitis	10	13	23	Purpura	5	2	7
Eczema	134	144	278	Roseola	1	....	1
Epithelioma	3	4	7	Scabies	9	10	19
Eruptio e copaiba	1	....	1	Scrofuloderma	1	2	3
Erysipelas	6	7	13	Strophulus pruriginosus	....	1	1
Erythema	3	4	7	Syphilis	21	22	43
Furunculus	11	10	21	Tinea	24	14	38
Herpes	7	6	13	Ulcus	7	10	17
Hyperidrosis	3	1	4	Urticaria	15	13	28
Ichthyosis	2	....	2	Varicella	3	....	3
Impetigo contagiosa	3	6	9	Verruca	3	3	6
Lichen	9	21	30	Vitiligoidea	....	2	2
Lupus	....	4	4				
Macula pigmentosa	1	....	1				
Morphœa	....	1	1	Total	362	412	774

TABLE II.

Disease.			Number.	Per cent.
1. Eczema	Impetiginodes	96	278	36.
	Squamosum	26		
	Papulatum	24		
	Rubrum and erythem.	8		
	Intertrigo	5		
	Unclassed	119		
2. Phthiriasis	Capitis	57	93	12.
	Corporis	36		
3. Acne	Sebacea	3	58	7.5
	Punctata	7		
	Molluscum	0		
	Simplex	32		
	Indurata	6		
	Rosacea	10		
4. Syphiloderma			43	5.7
5. Tinea	Tricophytina: Tonsurans	9	38	4.8
	Tricophytina: Circinata	8		
	Tricophytina: Sycosis	7		
	Tricophytina: Ecz. marginat.	1		
	Versicolor	9		
	Favosa	4		
6. Lichen	Simplex: Acutus	28	30	4.
	Simplex: Chronicus	1		
	Planus	1		
7. Urticaria			28	3.7
8. Dermatitis	Traumatica	6	23	3.
	Calorica	5		
	Exfoliativa	4		
	Venenata	4		
		4		
9. Furunculus			21	2.7
10. Psoriasis			19	2.4
11. Scabies			19	2.4
12. Ulcus			17	2.1
13. Erysipelas faciei			13	1.7
14. Herpes	Zoster	8	13	1.7
	Labialis	3		
		2		
15. Pruritus			12	1.5
16. Impetigo contagiosa			9	1.1
17. Epithelioma			7	.9
18. Erythema	Multiforme	3	7	.9
	Nodosum	2		
	Calorica	1		
	Papulatum	1		
19. Purpura	Simplex	4	7	.9
	Hæmorrhagica	1		
	Rheumatica	1		
	Lichenoides	1		
20. Verruca			6	.8
21. Hyperidrosis			4	.5
Carried forward			745	

Disease.	Number.	Per cent.
Brought forward	745	
22. Lupus { Erythematosus....2 / Vulgaris.....2 }	4	.5
23. Scrofuloderma	3	.4
24. Varicella	3	.4
25. Adenoma	2	.26
26. Chloasma	2	.26
27. Ichthyosis	2	.26
28. Vitiligoidea	2	.26
29. Abscessus	1	.13
30. Alopecia areata	1	.13
31. Carcinoma	1	.13
32. Eruptio e copaiba	1	.13
33. Macula pigmentosa	1	.13
34. Morphœa	1	.13
35. Nævus	1	.13
36. Pemphigus	1	.13
37. Pityriasis	1	.13
38. Roseola	1	.13
39. Strophulus pruriginosus	1	.13
Total	774	

Thirty-nine separate names of diseases are found in the above tables, which really represent a yet larger number of diseases: thus, under the generic term tinea are grouped all the vegetable parasitic diseases, of which favus and pityriasis or tinea versicolor are certainly quite distinct affections, and not related at all to the third variety, tinea circinata; under dermatitis are included both simple traumatic inflammation of the skin, that from heat and cold, and also that from the effect of local poisons, as the poison oak or ivy eruption, etc.

The total number of cases were pretty evenly divided between the sexes, three hundred and sixty-two males to four hundred and twelve females, the proportion being almost exactly that of last year, namely, about forty-seven per cent. males.

In regard to the age of patients as affecting the development of skin-diseases, dispensary statistics must always afford but meagre and unsatisfactory information, for the statements of quite a proportion of this class of patients in regard to the time of commencement and duration of the disease are very

uncertain; in some instances of psoriasis the disease had already lasted many years, and one case of lupus had been in existence for over thirty years before being entered on our books. But some interest or importance may be attached to the ages of the patients who were actually under treatment, and these are exhibited in—

TABLE III.

Age of Patient.	Males.	Females.	Total.
6 months and under	13	14	27
6 months to 1 year of age	8	7	15
1 year to 2 years of age	24	9	33
2 years to 3 years of age	21	11	32
3 years to 4 years of age	8	13	21
4 years to 5 years of age	9	5	14
Total 5 years or less of age	83	59	142
5 years to 10 years of age	42	52	94
10 years to 15 years of age	24	42	66
15 years to 20 years of age	39	58	97
20 years to 25 years of age	32	32	64
25 years to 30 years of age	30	36	66
30 years to 35 years of age	22	16	38
35 years to 40 years of age	18	36	54
40 years to 45 years of age	11	15	26
45 years to 50 years of age	18	33	51
50 years to 55 years of age	13	8	21
55 years to 60 years of age	10	13	23
60 years to 65 years of age	11	5	16
65 years to 70 years of age	4	3	7
70 years to 75 years of age	1	2	3
75 years to 80 years of age	4	..	4
80 years to 85 years of age	..	..	..
85 years to 90 years of age	..	1	1
Of unknown age	..	1	1
Total	362	412	774

It will be seen from this that almost one-third of all the cases of skin-disease occurred in children of ten years of age or under—two hundred and thirty-six, of which one hundred and forty-two were five or less years of age. The next decade furnishes the next largest number of patients, namely one hundred and fifty-three; from twenty to thirty years there were one hundred and thirty patients, and so on. In periods

of five years, that from fifteen to twenty furnished more patients than any other, except the first five years of life: the excess was here made up by acne and parasitic affections, which together comprised more than one-half of the whole. No deductions can be drawn from these figures in reference to age affecting skin-diseases without taking into consideration at the same time the number of individuals living at each of the periods, as shown by the census; it would be of little service to attempt such calculations on the results of one year's practice. We shall hope to make such an investigation at some future time, based on the analysis of many years' cases in succession. Of patients from one to five years of age, about two-thirds were affected with eczema; from five to ten years, only one-third the entire number had this disease. The youngest patient under treatment was aged one month; the oldest, a woman of eighty-eight.

The largest number of patients were recorded during the month of July, the smallest number during December; it may be remembered that the summer was intensely hot, and the results were shown in the largely increased numbers of cases of acute eczema which applied for treatment, almost one-sixth of the entire number being recorded during the one month of July.

It may not be uninteresting to note that the first four diseases on our present list, namely, eczema, phthiriasis, acne, and syphiloderma, occupy the same positions as last year, with percentages almost the same: thus, eczema last year furnished 35.1 per cent. of all the cases, this year exactly 36 per cent.; phthiriasis gives 12 per cent. this year against 9.2 of last year; acne 7.5 against 6.9 per cent. in the preceding analysis; and syphilis was the cause of but 5.7 per cent. of the present collection of cases, against 6.3 per cent. of those treated last year, and 9.8 per cent. in the thousand cases analyzed from the preceding year. Psoriasis comes further down on the list than last year, where it stood eighth, with a percentage of 3.2; it now ranks tenth in order of frequency, with a percentage of but 2.4; further experience convinces me that psoriasis is much less frequent in this country, or at least in this city, than is generally thought.

Certain other differences are also observed on a comparison of these tables with those of last year, besides the varying proportions with which some of the diseases presented themselves for observation. It will be found that the present lists differ from those of last year in the absence of ten of the eruptions mentioned there, and in the presence of eleven others which are not found among the cases recorded during the previous year, and this is not from any differences in the manner of recording the cases, but simply from the natural variations in the clinic. Thus, of the diseases recorded at this clinic in 1875, the following have not been observed during 1876, namely: anthrax, clavus, elephantiasis græcorum, eruptio e potassii iodido, folliculitis capitis, keloid e cicatrice, onychia, paronychia, rubeola, and xeroderma; while eleven others not met with last year have been present in one or more instances, namely: adenoma, alopecia areata, carcinoma, eruptio e copaiba, ichthyosis, lupus, morphœa, pigment-staining, strophulus pruriginosus, and vitiligoidea. During the last two years no cases of true prurigo (Hebra) or of scleroderma have appeared at this clinic, though the case I have recorded as pruriginous strophulus might by some have been looked upon as prurigo, and the case of morphœa resembled scleroderma in some features, of which more will be said later.

As far as I can learn, but two patients belonging to this department have died during the past year, both with phthisis: one, a girl eleven years old, who had purpura; the other, also a girl, sixteen years old, who had had pemphigus—both of which cases will be mentioned later.

The separate diseases may now receive our attention, and will be noticed, as on previous occasions, in the order of the number of cases of each:

1. Eczema.—The very great frequency of this disease is well exhibited in our record of patients. During the past year two hundred and seventy-eight cases of eczema occurred in a total of seven hundred and seventy-four, or 36 per cent. of the whole. This is almost the largest percentage with which I am acquainted (except that of Dr. White, of Boston, who records eczema as forming nearly 45 per cent. of hospital out-patients, and Dr. Duhring, of Philadelphia, who

states that eczema constitutes almost 50 per cent. of the entire number of cutaneous diseases), and, although it exceeds that obtained from private practice in this city, must be taken as a fair indication of the prevalence of this form of skin-affection; for, while only the rarer or more obstinate cases come to the specialist, the rank and file of cutaneous diseases being treated by the family physician, in the dispensary all skin-cases, or a large share of them, are turned over at once to this department. The cases of eczema were pretty evenly divided between the sexes, there being one hundred and thirty-four males to one hundred and forty-four females; last year the males preponderated by two, 110:108.

The ages of patients applying for treatment with eczema may be seen in the following:

TABLE IV.

Age of Patient.	Males.	Females.	Total.
6 months and under	7	12	19
6 months to 1 year of age	5	3	8
1 year to 2 years of age	20	5	25
2 years to 3 years of age	14	7	21
3 years to 4 years of age	3	8	11
4 years to 5 years of age	7	3	10
Total 5 years or less of age	56	38	94
5 years to 10 years of age	16	17	33
10 years to 15 years of age	3	6	9
15 years to 20 years of age	4	10	14
20 years to 25 years of age	6	7	13
25 years to 30 years of age	14	11	25
30 years to 35 years of age	11	4	15
35 years to 40 years of age	4	16	20
40 years to 45 years of age	4	7	11
45 years to 50 years of age	2	15	17
50 years to 55 years of age	6	2	8
55 years to 60 years of age	4	5	9
60 years to 65 years of age	1	2	3
65 years to 70 years of age	2	2	4
70 years to 75 years of age	...	...	...
75 years to 80 years of age	1	...	1
80 years to 85 years of age	...	...	...
85 years to 90 years of age	...	1	1
Of unknown age	...	1	1
Total	134	144	278

It will be seen that a very large proportion of the cases of eczema occurred in children, ninety-four of the whole number being five years or less of age, the next period of five years furnishing thirty-three cases, or a total of one hundred and twenty-seven, nearly one-half, in patients ten years of age and under; these figures correspond very closely to the ratios observed in my analysis of last year, and thus confirm some of the statements there made. From this will be seen the fallacy of drawing any conclusions in regard to the statistics of eczema from any clinic which does not include children. It will be remembered that Hebra's service at the hospital in Vienna is almost wholly made up of adults, children appearing there only as exceptions—certainly no cases of infantile eczema are included; the same is true of certain other clinics. The next period of greatest frequency of eczema was observed to be the years from twenty-five to thirty, which furnished twenty-five cases, the decade from twenty to thirty giving in all thirty-eight cases, corresponding to the observations of the preceding year: both years give a slight preponderance to males at this time of life.

The youngest patient treated with eczema this year was aged seven weeks, the oldest eighty-eight years; between these ages almost every month was represented up to the age of four years, and almost every year from that to seventy years, with but few exceptions. In some cases it was noted that the disease had lasted since the patient was one month old; one patient had had chronic eczema of the hands and arms for eighteen years.

Of one hundred and twenty cases where the location of the disease was recorded, it was found to affect the various portions of the body as follows: Face twenty-nine, head twenty-five, hands twenty-one, legs and feet ten, ears ten, arms seven, body seven, beard five, scrotum four, nails one, general eczema one. In many instances several portions were affected, but the eruption was here classified according to its most prominent or important location.

The two hundred and seventy-eight cases of eczema have presented very many different features, and have exhibited the disease in almost every possible phase, and have required many

different methods of treatment. Some cases have appeared to be almost wholly dependent upon external causes, and local treatment alone has been employed, while in many local measures have been entirely withheld, or nearly so, in order to demonstrate the constitutional origin and nature of the eruption. In the vast majority of cases both internal and external treatment have been employed, and another year's experience but confirmation to the views so often expressed heretofore, that adds by this mode alone can we successfully treat eczema, in conjunction, of course, with proper dietary and hygienic measures.

We do not include under eczema every case which presents many of the features of this disease: thus, the pustular eruption in the scalp, resulting from the presence of pediculi, we exclude, placing it elsewhere, under the term phthiriasis capitis, as being no more a true eczema than is the polymorphous eruption of scabies, which is now universally separated from eczema. Hebra, in his report, still includes the eruptions of the head from lice as eczema, although he has long separated those caused by body-lice, under the title excoriations. We also count many cases as dermatitis where a lesion, which may resemble eczema in some features, appears to be purely local, from a local cause, and which heals upon its removal; and, finally, some of the cases which we designate as lichen might be classed as eczema by some writers; these we will consider under the head of lichen.

Our treatment of these cases of eczema has not differed much from that presented in the report of the preceding year, although certain cases have demanded variations from the generally-recognized lines of treatment, which we will call attention to. Eczema is very frequently attended with constipation, especially among the poorer classes, who habitually neglect themselves in this particular, and purgatives were used considerably and to much advantage in very many afflicted with eczema. In the more acute forms a ferro-alkaline laxative of sulphates of iron and magnesia proved very serviceable, although many at once required the tonic effect of bark, iron, nux-vomica, and arsenic, to which mixture was very commonly added the acetate of potassa, in doses from five to fifteen grains thrice daily.

In my last year's report I alluded very favorably to the action of arsenic given alone in eczema, especially in that of infants and young children. My experience since that time has fully confirmed all then said, and more too; and, as the results of my studies have been recently made public,[1] I will not enter into the matter very largely at the present time. I may, however, mention one or two cases which have been followed out since that was written. The following case shows how well the drug may be borne, and what results may be obtained from it:

Charles Carey, aged sixty years, a butcher, came first to the dispensary in January, 1876; he is a fleshy man, of medium height. He then had eczema on the forehead and about certain portions of the face, which yielded to treatment, and he was lost sight of until September 19th. He then appeared with a papular eczema, covering almost the entire body, extremities and head. On the face and hands there was some moisture, but the greater part of the eruption was made up of papules, closely set, and covering really all the body. Many of the papules were apparently of the color of the normal skin, and some portions of the eruption could readily have passed for the true prurigo of Hebra; very many of them, perhaps the greater part, were of a red color, more or less acuminate, and answered to those of lichen; on disappearing, all of them left brownish-red stains, so that at a distance the appearance was as if there was still an eruption, but, on passing the fingers over the surface, no elevations were perceptible. On the backs of the hands and fingers the eruption was wholly eczematous.

The itching from the eruption was intense; the man was a very great sufferer, and all parts of the body bore the marks of much scratching. He was given pills of blue mass, colocynth and ipecac, to be repeated on the second night, and the following external application was ordered: ℞. Olei cadini, ℥ ss; olei morrhuæ, ℥ vj. M. Sig.: Anoint the whole body twice daily. The relief obtained by the treatment was considerable; and, on September 26th, the following was prescribed: ℞.

[1] The Use and Value of Arsenic in the Treatment of Diseases of the Skin. D. Appleton & Co. 1876. Reprinted from the New York Medical Journal, August, 1876.

Solut. De Valangin, ℥ ss; aquæ, ℥ ivss. M. Sig.: Commence with one teaspoonful three times daily, after eating, and increase as ordered. This mixture contains one drop of the solution of the chloride of arsenic in each ten, so that each teaspoonful represents six drops of the arsenic. The dose of this was gradually increased by taking an additional teaspoonful every two or three days, until, on November 21st, he was ordered to take three teaspoonfuls of the mixture, or eighteen drops of De Valangin, three times daily. The eruption was then wellnigh gone; there had been little or no itching for some weeks; the patient was in fine health and spirits; the site of each papule was plainly visible in the discolorations already alluded to, but all papular feeling was gone. Two weeks later, it was recorded that he was taking four teaspoonfuls of the mixture, or twenty-four drops of De Valangin's solution (equivalent to nearly ten minims of Fowler), three times daily. There was then some little pain at the pit of the stomach and slight soreness of the eyes; the arsenic was stopped, and compound cathartic pills given, also acetate of potassa. There had been no disagreeable symptoms until the full dose mentioned was reached; thus, while taking four teaspoonfuls, or twenty-four drops, morning and night, and three teaspoonfuls at noon-time, no inconvenience occurred.

The very rapid and visible diminution of the size and number of the papules following the use of the arsenic was strikingly confirmative of the results reported in my last "Analysis," especially of those in reference to the boy Thomas Hayes, five years old, who increased the dose of arsenic up to twenty drops of Fowler thrice daily, with the result of rapidly removing an eczema which had resisted all treatment since infancy. I may report further, in regard to the case of Thomas Hayes, that he returned, on July 13th, with a slight relapse, which yielded to treatment very soon; and again, in October, with another more severe attack, which again responded to arsenic very promptly.

In my last report I made especial mention of De Valangin's solution of the chloride of arsenic, which I had been using with advantage. This I have employed largely during the past year, and with good effects; I am not yet prepared to

say wherein or in what cases it is superior to other forms of arsenic, especially Fowler's solution, but I think I have found it to agree with the stomach better than the latter, which might be inferred from the fact that its acid corresponds very closely with that of the normal gastric juice; also, as a rule, rather less arsenic is required, in total amount, when this preparation is used; moreover, it can be often combined very advantageously with acid preparations, as muriatic acid and the tincture of chloride of iron, etc. Furthermore, we can sometimes get results from a change in the form of arsenic employed, just as in the use of iron; one preparation will sometimes prove very beneficial when others seem almost inert, or even harmful.

I remarked last year that I had used cod-liver oil less that year than during the preceding year, the class of patients not seeming to require it so much; this I have found still true, and have employed such remedies as acetate of potassa and sulphate of magnesia more. I have used the sirup of the iodide of iron very considerably in the eczema of children, and with good results, though in the main I have adhered to the treatment mentioned in my last report, namely, calomel once or twice a week in mild, purgative doses, with a ferro-arsenical mixture, generally containing also a little acetate of potassa.

Among the poor, as also among the rich, there is constant need of advice concerning the diet in patients with eczema. Especially do I find that most of the infants and children with this disease are fed either with large amounts of starchy foods or else upon the diet of adults, and very rarely have I found an infant with eczema whose diet has been either exclusively the mother's milk or exclusively cow's milk; when this is the case, I frequently find that the feeding is excessive, and too frequent and irregular, or else that the mother, if she is nursing the child, is either in very poor health or living on markedly erroneous diet, especially in the way of the use of much tea or of fermented liquors. I never allow nursing-women to take ale, beer, or the like, or wines, with the delusive hope of making abundance of good milk, but always insist that they shall, if possible, consume a large quantity of milk them-

selves; and, if alcohol is wanted, I prefer much to give it in the way of the tinctures, or the distilled liquors, especially whiskey, in small quantities. Prolonged lactation I find to be very common in cases of infantile eczema.

As an illustration of some of the difficulties attending dispensary practice, showing also the manner in which advances may occasionally be made in therapeutics by the mistakes of patients, I may mention the following case:

Sarah McM., aged twenty-three, a cook, came for the treatment of an acute eczema of the head on December 5th. The whole head was the seat of an exuding eruption; and her hair, which was of moderate length, was matted together in what appeared to be an irreparable confusion. She was given cod-liver oil, with directions to soak the head thoroughly with it three times, that is, on returning home, again at bedtime, and in the morning to add fresh oil; and then, at the expiration of twenty-four hours from the first application, she was to wash it out thoroughly, once only, with Castile soap and warm water, and to again apply the oil half an hour afterward. She was also given the following, with directions to take one teaspoonful after eating: ℞. Potass. acetatis, ʒj; tinct. gent., ʒj; aquæ, ʒiij. M. By mistake she took the cod-liver oil internally, and employed the medicine externally, using it up in three applications, and then washed the head as directed the next day, but applied nothing afterward. The result was that, on the second day, December 7th, she came with the head very greatly improved, the exudation had entirely ceased, the hair was combed out in full length, and, in a word, better results were accomplished than had been looked for under the treatment directed. She was then directed to reverse the order, and use the oil externally, and take the acetate of potassa as prescribed; and five days later, or one week from the first visit, the scalp was about normal, except some scaling, for which the following was ordered—℞. Ung. hydrarg. nitratis, ʒj; ung. simplicis, ʒvij; M.—under which the scaliness is disappearing.

It is well to bear in mind that two distinct skin-diseases may, and do, not infrequently, affect the same individual at the same time, and thus the symptoms of one mask those of

the other. Thus, in two instances, infants had both eczema and infantile syphilis at the same time; and a third appeared early in the year with eczema, and six months after with syphilis. One of these cases has already been reported;[1] in the other case the infant had been under treatment for some time for a rebellious eczema, when, quite suddenly, a general papular syphilide, of unmistakable character, appeared over the whole body. I may, in this connection, mention also the case of a man, aged thirty-six, with constitutional syphilis, on the flexor surface of whose left wrist was a papular syphiloderm, which so completely resembled a patch of chronic eczema that it was diagnosed as such for a moment, until further investigation revealed a history of syphilis, and a tubercular eruption of the same was found on the scalp. He was put on mixed treatment with but little effect, when it was stopped and mercurial inunctions substituted, and the patch rapidly disappeared. In another patient, a German woman, aged forty-five, there was well-marked eczema on the hands, arms, face, and ends of fingers, all of which improved promptly under specific treatment, there being a very plain history of syphilis.

During the past year, partly for economy, and that patients might have a large supply of the article, I have made considerable use of mutton-tallow and cod-liver oil, in about equal parts, as a dressing in eczema, and with very good results, as I have mentioned on several other occasions. The tallow should be very fresh; it is tried out, and, when melted, is mixed with cod-liver oil in about equal quantities, more or less according to the weather, and the two are stirred till cold. This is spread thickly on cloths and laid on the part, either alone or after the application of such other treatment as the case demands.

One case of eczema of the hands deserves special mention, from the excellent results obtained by means of rubber gloves. A German woman, aged twenty-seven, married, whose husband was a confectioner, and whose hands had been continually subjected to injurious influences, as in making ice-cream, etc.,

[1] *Archives of Dermatology*, July, 1876, p. 313.

came to Demilt in April with eczema of the hands, which received benefit, and she soon disappeared from observation. Early in the fall she returned with the same trouble, but very much worse: the palms were hard and deeply fissured, and the eruption extended to both the palmar and around to the dorsal aspects of many of the fingers; the hands were completely useless for work, and the suffering from them intense. She was placed upon the same measures which had proved efficacious in the spring, but the result was very unsatisfactory. On October 24th she was ordered to procure two pairs of rubber gloves, and to wear one pair at night and the other pair during the day; some of the local measures were also continued. The change in about a week was marvelous to one not accustomed to the effect of impervious dressings: the cracks had almost entirely disappeared, and the palms were as soft and flexible as could be wished. To see how far the tissues were really altered, the gloves were discontinued for a few days, shortly after this, and the parts thickened and hardened and cracked soon to a very considerable extent. The gloves were resumed, but as the eruption improved the patient became somewhat restless under the continued cumbering of the hands, and neglected to wear them as persistently as was intended. A number of cracks occurred, which were touched thoroughly with a stick of pure nitrate of silver, and healed rapidly. Other measures were used at times to hasten the restoration to health of the parts, but the gloves formed the main-stay of treatment, and the result has been a speedy and complete removal of the disease. She has used up several pairs of gloves; but, considering her occupation, which she has been thus enabled to carry on, she has willingly borne the expense.

While under this treatment eczema appeared in subacute form on the forehead, whereupon she was given internal treatment as well; at a later date she brought her little child, also affected with eczema, both of which facts go to show that the eczema of the hands was due to other than purely local causes.

In a case of pretty severe eczema of the scrotum in a man aged thirty-five, it was suggested by a physician attending the

clinic to use a solution of sulphate of iron locally (℥ij ad aquæ Oj), which was followed by mutton-tallow, together with appropriate internal measures; the results were very unfavorable: the disease was made decidedly worse, and this treatment was abandoned. The case proved a rebellious one, but was finally discharged cured after two and a half months' treatment.

In another place[1] I have reported a case of chronic localized eczema of the back of the left hand in a woman aged thirty, which was very successfully treated by first painting the spot several times a day with a solution of gutta-percha in chloroform. She was enabled thereby to do washing, and the improvement in the eruption even under the circumstances was very marked; subsequently the compound tincture of green soap of Hebra and diachylon-ointment removed the infiltration and cured the case.

A widow woman aged thirty-six, who had an obstinate eczema of the right leg due to varicose veins, made very rapid improvement as soon as she was forced to seek work which compelled her to walk about two or three miles daily; she then bandaged the leg, which she had been previously directed to do, but had failed to accomplish, because she thought it gave too much pain.

2. Phthiriasis.—Lice were recognized as the distinct exciting cause of skin lesions in ninety-three patients, forty males and fifty-three females; these cases presented no peculiarly interesting or unusual features, and require no special comment. Phthiriasis capitis was treated almost universally on the plan mentioned in former reports, namely, by repeated saturations of the head with kerosene oil, with subsequent washing and inunction with zinc, or weak white-precipitate ointment, when there were any raw surfaces left. Phthiriasis corporis was generally treated with the lotion of carbolic acid and caustic potash, as in former years.

3. Acne.—Next in order of frequency of occurrence comes acne, with fifty-eight cases, twenty males and thirty-eight females. The nearly double number of females indicates in

[1] *Archives of Dermatology*, April, 1876, p. 222.

part only the greater liability of this sex to acne, inasmuch as males, especially among the lower classes, give less attention to such cutaneous disorders as do not affect their physical comfort. The percentage of cases will be found to be somewhat greater than during the previous year, 7.5 being the proportion this year against 6.9 per cent. the year before.

The ages of patients applying for the treatment of acne are shown in the accompanying table:

TABLE V.

Age of Patients.	Males.	Females.	Total.
At 13 years of age	..	1	1
At 14 years of age	..	3	3
At 15 years of age	..	3	3
At 16 years of age	3	5	8
At 17 years of age	1	3	4
At 18 years of age	3	7	10
At 19 years of age	3	2	5
At 20 years of age	2	3	5
20 to 30 years of age	6	6	12
Over 30 years of age	2	5	7
Total	20	38	58

It will be seen that of nineteen patients who were seventeen or less years of age fifteen were females, all of these cases being, I believe, embraced under the terms acne punctata and simplex; one patient is entered at the unusually early age of thirteen. The oldest patient with this disease was a woman aged fifty-five, with sebaceous acne, who was a cook. One man, a sailor, aged forty-six, presented in a marked degree hypertrophic acne rosacea, the end of the nose especially being greatly enlarged, in irregular lumps, purplish, and with the orifices of the sebaceous glands greatly distended.

In one case, that of a woman,[1] aged forty years, acne had produced a disfiguration which so closely resembled smallpox that it was difficult to believe that the deep cicatrices were not the result of the latter disease. The lesions were

[1] *Archives of Dermatology*, January, 1877, p. 131.

grouped under the name acne indurata and rosacea, and the appearance may be thus described: The entire face was greatly reddened, and about the nose, cheeks, forehead, chin, and neck, numerous purplish lumps or masses of induration were clearly distinguishable at her first visit. Some were painful on pressure, others not; and from many of them an appreciable amount of pus was obtained by a deep thrust of the lancet, but few had any pustular summits. The entire face and neck was the seat of numerous depressed cicatrices of various sizes and shapes, most of them pale, but some red, being of more recent formation. All the surface was very greasy, the skin thick and doughy, and the orifices of the sebaceous glands gaping, with no comedones. The patient was a seamstress, and presented many of the symptoms of dyspepsia: pulse, 120, and weak; tongue coated, pale, and flabby. The case has received the most marked benefit from the use of the following, and is still under treatment: ℞. Potass. acetat., ʒj; ext. tarax. fl., aquæ, āā ʒij. M. Sig.: Take a teaspoonful half an hour before eating, well diluted; the diet and other elements were also attended to; locally, she used only hot water to the face, and the tubercles were mostly opened as soon as pus could be discovered; some of the smaller pustules were treated by scraping with the *dermal curette*.

I have treated quite a number of cases of acne during the past year by means of this latter little instrument, and really have found it of much advantage in many instances. For those unacquainted with it, I may say that it is simply a small, spoon-like steel instrument, with sharp edges, resembling somewhat those used in gynecological practice, but with a shorter handle. The idea of the *curette* in acne is to remove mechanically the impediments to the free excretion of the sebum, and it is used to scrape off the summits of the pustules and large papules of acne simplex, and to remove the epithelial clogging of the glands in some cases of punctate acne. I simply scrape the surface, removing the contents of pustules (generally causing a small amount of blood to flow); I then apply minute portions of cotton to each bleeding or exuding pustule or papule; this adheres for a few minutes, may be then brushed off, and the abrasion is dried; a small crust may

be formed which falls the next day, and the pustule, which might and probably would have taken from one to three weeks in running its course, is brought to a termination in twenty-four hours or so. Of course no scar is left by this procedure, as the pus accumulations thus removable are located only beneath the epidermis; where there are large lumps or masses, round on top, the pus cannot be reached by this method, but these should be at once opened by means of a perpendicular thrust of a lancet, in order to avoid disfiguration, such as had occurred in the case just mentioned.

In one boy, aged eighteen, I treated one side of the face by this means alone, the other side being left untreated, and the difference was very perceptible, and that after only one or two scrapings. The process was repeated about a dozen times in this case. This method is not recommended as a substitute for other treatment, but is a valuable addition to other means in both public and private practice, especially when it is desired to accomplish results very quickly, as for any particular occasion. With this local procedure may be mentioned also the well-known method of forcing the black-headed sebaceous plugs from their beds by means of a watch-key, or, better, by a small metal tube with a round, smooth end, with an aperture of about $\frac{1}{32}$ of an inch; this I have made almost daily use of at the dispensary.

The same etiological elements have been noted in acne during the past year which have been observed in the years gone by, and the impression is deepened in my mind that sebaceous disease is very intimately associated with disorders of the digestive system, and can be best managed by a most careful regulation of this latter. The treatment, therefore, of acne has consisted very largely in directions about diet and hygiene, and very many cases have received laxative remedies, the most common, probably, being a pill of aloes and iron, given regularly with the meals, the number being slowly diminished, as a more normal action of the digestive organs ensues. I have still used De Valangin's solution of arsenic, as mentioned in my last "Analysis," and with very favorable ultimate results in a number of cases of acne.

It is believed and stated by writers on the eye that acne

ciliaris and affections of the Meibomian glands depend on the same causes as ordinary acne, and will not uncommonly be found associated with it; in but two cases was ciliary acne observed in connection with acne simplex, and once Meibomian disease was associated with hypertrophied acne rosacea.

4. Syphilodermata.—Forty-three new patients came under treatment for syphilis during the year; of these, twenty-one were males, and twenty-two females; the percentage of these syphilitic diseases in the total number is but 5.7 per cent. against 6.3 per cent. of last year, and 9.8 per cent. of the year before. It would be gratifying if we could feel that this was an indication of the decrease of the disease in our midst, but in our judgment this is far from being the case, the contrary rather being true. The following are the ages of the patients with syphilis:

TABLE VI.

Age of Patients.	Males.	Females.	Total.
6 months and under	2	..	2
6 months to 1 year of age	1	1	1
1 year to 2 years of age	..	1	1
2 years to 3 years of age	..	1	1
3 years to 4 years of age	..	..	..
4 years to 5 years of age	..	..	..
Total 5 years or less of age	3	3	6
5 years to 10 years of age	..	..	..
10 years to 15 years of age	1	..	1
15 years to 20 years of age	2	1	3
20 years to 25 years of age	6	4	10
25 years to 30 years of age	4	5	9
30 years to 35 years of age	..	2	2
35 years to 40 years of age	2	2	4
40 years to 45 years of age	1	3	4
45 years to 50 years of age	1	1	2
50 years to 55 years of age	..	1	1
55 years to 60 years of age	1	..	1
Total	21	22	43

The six patients with infantile syphilis were aged respectively seven weeks, eight weeks, seven months, eight months, thirteen, and twenty-six months. It will be seen that there

were no patients with syphilis between the ages of twenty-six months and fifteen years, the period between the common development of hereditary syphilis and the age of its usual acquirement; the decade between twenty and thirty furnished nearly half the cases; the oldest syphilitic was a male, aged fifty-eight. It will be remembered that these cases do not include primary sores, except under rare instances, where cutaneous or other constitutional manifestations have already appeared; these statistics, therefore, represent more correctly the real presence of constitutional syphilis among us than would those drawn from a venereal department, inasmuch as certainly a large share of the cases of syphilis manifest at some time cutaneous phenomena, and would, therefore, when applying to the dispensary for relief, be referred to this department. The total proportion, then, of syphilitic cases to all other cases of skin disease during the past two years has been just six per cent.

The youngest patient recorded with acquired syphilis was aged nineteen, a female; there were two males aged twenty—these were all who were twenty or less years of age. One patient, aged fifteen, a boy, is recorded with syphilis; but it was impossible to discover whether the disease was acquired or the result of hereditary influences. The lesions had existed four years; the case is still under observation, and will be reported on later.

Very unusual interest has been attached to the cases of syphilitic disease during the past year from the great variety presented and the rarity of some of the lesions. The disease has been observed from the earliest manifestation of constitutional symptoms to the development of lesions occurring many, many years after infection, from the most superficial macular eruption appearing while the chancre was still present, to the most profound destruction of tissues and the implication of nerves, bones, the eye, etc.

Two cases of chancres of the breast have been observed, in which the nursing infants were subjects of syphilis: the cases are still under observation, and, although there is some slight evidence that the disease was acquired, and not the result of paternal transmission inoculating in turn the mother,

it would be premature to report the cases at the present moment either as sustaining or tending to overthrow any views in regard to the possibility of an hereditary syphilitic child communicating the disease to its own mother. Both children and both mothers made very rapid recovery, mainly on the use of mercurial inunctions, the chancrous ulcerations on the breasts cicatrizing in very few weeks.

Several patients reported in the last "Analysis" have been under my care still during the past year. Mary R., aged twenty-four, who was alluded to as having syphilitic bursitis of the right knee, developed the same lesion subsequently in the bursa over the olecranon process of the right arm, and later she was the subject of very deep gummy tumors on the same right knee, which ulcerated, and finally large masses of tissue sloughed and came away, leaving a cicatrice adherent to the fibrous tissues of the joint. It would be impossible to say if the disease had involved the bursa in the slough—motion of the limb is not impaired. When the sloughing was at its worst, there was some constitutional disturbance, and she received quinine pretty freely, and iodoform-ointment (℥j ad. ℥j); latterly she was given an ointment of iodine and iodide of potassium, and moderate doses of iodide of potassium internally.

The young man, aged twenty-three, mentioned in last year's "Analysis," with very severe syphilis, which was affected badly by mercury, has been seen since, and has entirely recovered from immediate symptoms, but the remains of the anterior cervical adenitis are plainly visible.

An interesting instance of the natural course of syphilis when left untreated was observed in the person of a young German man, aged twenty-five.[1] He had contracted a chancre in 1868, which was treated locally and disappeared, and the few syphilitic symptoms which had occurred since had also disappeared, and *he had never received any medication for his syphilis.* He came for the treatment of a very extensive tubercular ulceration involving two-thirds, at least, of the right lower leg; there was also some disease of the same character on the

[1] *Archives of Dermatology*, October, 1876, p. 27.

right side of the head. The ulcerative disease had begun on the leg two years previously—that is, six years after the primary sore, and had progressed steadily in spite of continuous local treatment. The disease had begun on the head six months previously; latterly, for some time, he was in attendance at the Homœopathic Medical College. The case made very rapid progress, and in two months almost the entire surface was cicatrized, the ulcerations on the head healing in about a month. The treatment was by means of the commonly-employed mixture of bichloride of mercury and iodide of potassium; locally only a little carbolic acid was employed to correct the terribly offensive odor which completely filled the room at the first visit.

A not inconsiderable number of cases of undiagnosed and consequently untreated syphilis of long duration appear at this clinic during the year, and the following is another striking instance where the true nature of the lesion was even more apparent than in the former case:

Ann M., a healthy-looking woman of twenty-nine years, exhibited a most perfectly characteristic syphiloderm of the right palm, which had existed there three years continuously, and for which she had twice been in a hospital in this city—once for a period of six months, and once for three months; on both occasions, as also during its entire existence, it had been treated locally, and with never more than a slight and temporary relief to some of the more distressing features, especially the cracking, which, when she first came under observation, quite disabled her.

The eruption possessed all the features of the palmar syphiloderm, which need not be here detailed, and on close inquiry the following history, in brief, was obtained: Ten years ago, or three months after marriage, she had a sore-throat lasting all the winter, and loss of hair, and has since been troubled much with occipital headache, worse in the afternoon and at night. Soon after marriage she had a miscarriage at two months; a second one followed at three months, and a third one at five months; she then had a child dead, born at full term; next came a child which lived two months, and after that another which lived six weeks; she then ceased

bearing. The children that reached full term all had eruptions, especially on the palms and soles. Her husband had acknowledged having syphilis; he died three or four years ago.

This narrative is given as showing the natural history of syphilis, and rarely do we find its recognized course in regard to miscarriages and diseased children so perfectly exhibited as was shown in the results of the six impregnations in this case. Amazement must strike every one that the true nature of the eruption on the palm was not discovered before, especially during her sojourn twice in a hospital for periods of six and three months respectively. Recovery was remarkably speedy under mixed treatment, although she was obliged constantly to do household work, including washing of clothes; in a month it was noted that normal skin had returned to a considerable portion of the palm, and at the expiration of two months only isolated tubercles remained at the margin. She received no local treatment for the first month; then she was given diluted citrine-ointment, and latterly the unguentum hydrargyrum, to be well rubbed into the palm.

It will be noticed that the palmar syphiloderm commenced seven years after the primary lesions in this case, and had existed three years, the date of her first visit being nearly ten years from the first constitutional symptoms of syphilis; the lesion in that case, as the late tertiary lesions so generally are, was unilateral. There has been attending at the same time another woman, who exhibited so perfectly the early form of palmar lesion of syphilis that mention of the case may be interesting in connection with the preceding.

Jane H., aged forty-three, gives a clear history of syphilis contracted from her husband, having had the primary sore about March, 1875. This was followed by constitutional symptoms, including a general papular eruption, and the palmar lesion commenced about ten months previous to her undergoing treatment at my hands, that is about a year after the infecting sore. The disease occupied both palms quite symmetrically, corresponding to the mode of arrangement of the earlier skin-lesions of syphilis, and presented few difficulties of diagnosis with the exercise of proper care. The

patient has been somewhat irregular in attendance, because after the first few weeks the disease had so far disappeared under antisyphilitic treatment as to cause her but little inconvenience, and she was much occupied with family cares, she having a number of children. In this instance there was none of the history of miscarriages and diseased children, thus affording additional testimony of the correctness of our chronology of this double form of syphiloderma of the palms, and that the inoculation was of recent date, since the birth of all her children, who are healthy.

A very interesting lesion of syphilis occurred in the person of a young man aged twenty-one, who exhibited a complete facial paralysis of the right side, with very considerable bony enlargement of the same side of the face. There was a tubercular ulceration on the upper lip, also on the right side of the scalp, and the history was confirmative of syphilis. Very rapid progress was made at first under specific treatment, the ulcerations healing very soon; the bone-lesion and nerve-disturbances have yielded much more slowly. He first came under treatment early in April; at the close of the year there was still some facial paralysis exhibited on whistling, elevating the eyebrows, etc., and still some thickening of the malar prominence could be made out.

The diagnosis of all the cases of syphilis has not always been a very easy matter. In one widow of thirty-eight years[1] a tubercular, non-ulcerating syphiloderma of the face so resembled lupus, and the history so confirmed the appearances, that the diagnosis was held in suspense for some time. The eruption, which improved for a while under iodide of potassium alone, yielded quickly when a trifle of mercury was added. I have, when speaking of eczema, mentioned the eruption on the flexor surface of the left wrist of a waiter-man aged thirty-six, which very closely resembled eczema, and for the moment was diagnosed as such to the class present. In the case of a woman, Bridget H., aged twenty-six, lupus erythematosus so simulated syphilis that I gave the patient the benefit of the doubt, and treated her for the latter disease for several months;

[1] *Archives of Dermatology*, April, 1876, p. 220.

but the improvement was only very moderate, and the further progress of the case showed it to be one unmistakably of erythematous lupus.

During the past year I have made much more frequent use of mercurial inunctions in syphilis than formerly, partly for economy, and am thoroughly satisfied that the mineral often acts thus far better than when given by the mouth, and have consequently been led to employ the same more in private practice. Its well-known advantages in certain forms of syphilis, as in infants and in iritis, should be constantly borne in mind. I have also used the bicyanide in solution by the mouth, but am not prepared yet to report on the results. In one infant aged thirteen months, whose mother had chancre of the breast, the child's strength seemed to be failing under mercurial inunctions, and the mother was directed to give it thrice daily eight or ten drops of her own mixture, containing bichloride, iodide of potassium, iron, nux-vomica, and bark; and the results were most gratifying, the appetite returned, and the eruption continued to fade most satisfactorily.

5. Tinea.—The vegetable parasitic diseases, which were present in larger proportion this year than during the preceding—4.8 against 3.4 per cent.—were represented by thirty-eight cases, of whom twenty-three occurred in male and fourteen in female subjects. These affections were thus divided: First, those due to the parasite *trichophyton* (*a*), tinea tonsurans (ringworm of the head), nine cases; (*b*), tinea circinata (ringworm of the body), eight cases; (*c*), tinea sycosis, seven cases; (*d*), eczema marginatum, one case; total, twenty-five: second, that caused by the *microsporon furfur*, tinea versicolor, nine cases; third, that due to the *achorion Schönleinii*, tinea favosa, or favus, four cases.

One case of tinea circinata was peculiarly interesting from the large extent of surface affected, and the close resemblance which the eruption presented to tinea versicolor. It was in the person of a married woman aged twenty-nine, who at first exhibited an eruption upon the back and part of the chest, and it was at once thought to be the latter disease, there was so little of distinct character to the appearances. On further inquiry it was learned that the same existed on the arms, but

here its features were no clearer. A microscopic examination of the scales and hairs showed that it was due to the trichophyton, and not to the microsporon furfur, and at a later visit it was discovered that the disease extended down on to the abdomen and thighs, and even on the upper part of the legs, and in this latter situation the characteristics of tinea circinata were quite distinct. Treatment removed the disease quickly. She first used citrine ointment diluted, and was afterward given the *liquor picis alkalinus*, to be rubbed in full strength, which proved much more efficacious than the ointment.

A little girl, aged eleven years,[1] presented an unusual form of tinea circinata on the right leg. The eruption seemed to advance in a spiral, there being several rings, or rather oval lines within each other, which, on careful tracing, were found to be continuous, forming a spiral. The parasite was found microscopically.

A very unusual proportion of cases of parasitic sycosis is recorded, namely, seven in the entire thirty-seven. While not insisting on the parasitic nature of all these cases beyond a peradventure, we feel confident that almost if not quite all of them were of this nature. In several of them microscopic study revealed the parasite. This examination was not made in every case, but the clinical features were carefully studied, as there were at the same time in attendance many cases of eczema barbæ, and there was abundant opportunity of comparing the diseases. One patient was a stableman, and another a butcher, who could readily have acquired it from animals; another case was in a man of forty years, who brought a child with tinea tonsurans, of well-defined character, and exhibiting the parasite microscopically.

The cases of the next variety of vegetable parasitic disease, *tinea versicolor*, sometimes called pityriasis versicolor, and wrongly designated chloasma or liver-spots by some, presented no specially interesting features. These were nine in all, six females and three males, ranging from eighteen to fifty-two years of age.

Four cases of *tinea favosa*, or favus, were observed, three of which possessed very great interest, inasmuch as they

[1] *Archives of Dermatology*, July, 1876, p. 311.

affected the epidermis, and were on other portions of the body than the hairy scalp, which is the more common seat of this affection. The fourth case affected the head of a tailoress aged twenty-one. The cases of epidermic favus were confirmed by the microscope.

The usual treatment of these parasitic diseases was diluted citrine ointment, oil of cade, liquor picis alkalinus, etc. Sulphurous acid, which I greatly prefer, was not much used, because of the difficulty of keeping it strong, and of properly using it in dispensary practice. Bichloride of mercury was not used at all, on account of the danger attending its employment in ignorant hands.

The youngest patient affected with a vegetable parasitic disease was a boy of two years, with well-marked tinea tonsurans. There was also a boy three and a half years old, with favus epidermidis. The oldest patient was aged fifty-two, a man with tinea versicolor.

6. Lichen.—In my former reports I have given my reasons for maintaining the existence and comparative frequency of the disease lichen of older writers, and I am the more confirmed in the tenability of the position by another year's clinical experience. It will be noticed that I have recorded twenty-four cases as papular eczema, besides which there were, of course, very many other cases of eczema where papulation was more or less marked. I have recorded this year also thirty cases as lichen, occurring in nine males and twenty-one females. Of these, twenty-eight cases were entered as acute lichen, one as chronic, and one of that rather peculiar and more-recently recognized lichen planus. The youngest patient was a male child aged seven; the oldest, also a male, of sixty-five years. I do not recall anything new or peculiarly interesting in regard to the cases or their treatment.

7. Urticaria.—Twenty-eight cases of urticaria were recorded, which exhibited all the phases of this remarkable affection. In dispensary practice, where the time of attendance is limited to certain days and hours, it is rather the exception to observe the eruption of urticaria in its typical stage. Comparatively few cases have exhibited well-marked wheals at the time of visit, and it is frequently necessary to depend upon

the history of the case, verified by careful cross-questioning, and upon certain after-lesions on the skin. By the latter I mean the papular eminence which is generally left for a while after the wheal subsides, together with the marks of scratching.

Most of the cases were of acute character; a few were recorded of several years' duration; but few returned after the first visit, and many of them were probably relieved at once. The ages may be seen in the following:

TABLE VII.

Age of Patient.	Males.	Females.	Total.
10 years of age and under	4	..	4
10 years to 20 years of age	3	5	8
20 years to 30 years of age	..	7	7
30 years to 40 years of age	3	..	3
40 years to 50 years of age	3	..	3
50 years to 60 years of age	1	1	2
Over 60 years of age	1	..	1
Total	15	13	28

The treatment was usually cathartic and alkaline, considerable use being made of what we have often referred to as Startin's mixture, of sulphates of iron and magnesia, etc.; also of the well-known rhubarb and soda mixture.

8. Dermatitis.—There was little of interest in the cases classed as dermatitis, with which there were twenty-three patients, ten males and thirteen females. Six of these were due to traumatic causes, five to the effects of heat and cold, four to poisons, four appeared to be simply idiopathic inflammation of the skin, and in four instances it was simply recorded that dermatitis existed. Of the cases of dermatitis venenata, one was apparently the result of a spider-bite, which caused very considerable dermal and sub-dermal inflammation in the left forearm of a little girl seven years old, which suppurated, was opened, and discharged unhealthy pus for some time.

9. Furunculus.—In the twenty-one cases of furuncles (eleven ten females) the same plan of treatment was pursued

with success which has been mentioned in former reports, namely, the hyposulphite of soda, in moderately large doses, three or four times daily, or even oftener, on an empty stomach, and well-diluted. Of these cases, eleven, or more than one-half, were entered during the months of July and August.

10. Psoriasis.—Many writers have regarded psoriasis as one of the most frequent of skin-affections. It here stands tenth on our list, and shows even a less percentage to the whole number than was observed last year, which was unusually low. In the present analysis it forms but 2.4 per cent. of the whole, in the preceding year it formed 3.2 per cent. The cases were very evenly divided between the sexes—nine males and ten females. In the report last year the females were three times the males in number, an illustration of the fallacy of drawing any important conclusions from a single analysis, or a single year's experience. The youngest patient with psoriasis was aged eleven years, a girl; the oldest sixty-six years, a woman, whose daughter was the subject of very marked and severe lupus vulgaris. The age of the patients when applying for treatment may be seen in—

TABLE VIII.

Age of Patient.	Males.	Females.	Total.
10 years to 20 years of age	3	3	6
20 years to 30 years of age	3	1	4
30 years to 40 years of age	1	2	3
40 years to 50 years of age	1	3	4
50 years to 60 years of age	1	..	1
Over 60 years of age	..	1	1
Total	9	10	19

The greatest recorded duration of the affection was thirty years, in a woman of forty-one. In one case, that of a boy sixteen years old, the disease had just made its appearance. Very many of the cases were of the variety psoriasis guttata, though some of them were very extensive, in one or two in-

stances covering almost the entire body. In one man, John R., aged thirty, all the limbs were completely involved, even the flexor surfaces of the knees and elbows; upon the body the eruption was more scattered, in characteristic patches. As the disease began to yield, the flexors cleared off first, and here and elsewhere the more recognizable forms of the eruption appeared. In another case, of a woman about forty years of age, the eruption, which affected the arms only moderately, was so confluent on the thighs and legs as to cause very much pain and discomfort with the burning. In another patient, a married woman,[1] aged thirty-three, the hands and wrists were so completely covered with the eruption that the appearance was exactly that of a very aggravated eczema: deep fissures existed, causing great pain. Farther up the arms the lesions were very typical of psoriasis.

Psoriasis is perhaps the most unsatisfactory of all diseases of the skin to treat in dispensary practice, because of the irregularity of the attendance of patients, and because they are so readily discouraged at the necessarily tedious nature of the disease and its treatment. In many instances, therefore, I have simply sought to give relief from the symptoms, which are peculiarly annoying, having learned by experience that in cases which have already lasted for several years the patients will not persist long enough to make it an object to attempt the cure. I have therefore made large use of acetate of potassa, which almost always accomplishes much for this disease, and which, together with proper local treatment, has in my hands removed the eruption from many psoriatic patients. When the eruption is of recent date, I take great pains to impress upon the patient the advisability of persisting in treatment, and very generally give arsenic, with other measures.

I am sorry not to be able to report further on the use of phosphorus in psoriasis; I was obliged to discontinue its employment because the results seemed so unfavorable: this class of patients are so careless about medicines that they readily take an overdose, or do something to render the action of such drugs uncertain, or even dangerous.

In several instances the results of treatment have been

[1] *Archives of Dermatology*, April, 1876, p. 223.

gratifying; in the very severe general psoriasis, alluded to above, almost the whole eruption had disappeared before the expiration of two months, and this alone on the acetate of potassa, about thirty grains three times daily. In a boy of fifteen, with recent psoriasis of a very typical, nummular variety, the eruption disappeared almost entirely in about two months, under increasing doses of arsenic, in the form of De Valangin's solution. He began to show signs of the physiological action of the drug when about six drops thrice daily were reached, and at this time the disease was vanishing very rapidly.

11. Scabies.—Nineteen cases of scabies were recorded; of these, nine were in male and ten in female subjects. There was nothing unusual in them; the younger patients, with more delicate skins, were mainly treated with storax and balsam of Peru; the males, and those better able to bear it, received sulphur ointment. The ages ranged from four months to forty-two years. The latter patient was the mother of three children, aged respectively eight months, four years, and eight years. There was another family of three, seven and eight years respectively. There were no cases of scabies entered during the months from March to September, this being a disease much more commonly observed during the colder seasons, it being known also that scabies is far more prevalent in cold than in warm countries. In McCall Anderson's statistics from ten thousand hospital skin-cases in Glasgow, scabies formed a trifle more than one-quarter of all the cases.

12. Ulcers.—The cases of ulcers occurred entirely on the lower extremities, and the large majority of them were due to varicose veins, or, perhaps it would be more proper to say, were the results of the same causes which produce varicose veins, and were, as a rule, accompanied by them. Primary venereal ulcers do not appear in this department; the later ulcerations of syphilis are classed under their proper head: where the ulcers were plainly a part and result of eczema they were referred to that disease, and excluded from the present list.

There were seventeen cases of ulcers, ten in females and seven in males. The ages of the patients ranged from thir-

teen to seventy-seven years; in some of the cases, especially in young persons, the ulcers were of traumatic origin. They all occurred in persons obliged to stand much of the time, as in mothers of families, cooks, wash-women, laborers, a blacksmith, printer, etc. In a good share of the cases favorable results were reached by the ordinary methods of treatment, bandaging being also largely employed. The local application of chloral in solution, five to ten grains to the ounce, as reported on last year, has still given good results.

13. Erysipelas.—All of the cases of erysipelas affected the face, and in all of the thirteen cases, six males and seven females, the results of treatment were very satisfactory. The treatment, I believe, was the same in every case, with slight variations, and all but three of the cases were seen two or more times, and in all of these the change was very marked on the second visit, which was generally two or three days after the first. The treatment consisted in from two to four compound cathartic pills (U. S. P.), taken at night, and large doses of the tincture of the chloride of iron (♏x–xxx) every two or three hours. The local treatment was invariably keeping the face well dusted with powdered starch or flour. The patients were generally kept from work for a few days. The results of treatment may be judged from the fact that ten of the cases reappeared at the clinic within a few days greatly improved, the success being in a large measure attributable to the promptness of treatment. None of the cases occurred during the months of November, December, January, February, or March.

14. Herpes.—Thirteen cases of herpes were recorded during the year, seven in male and six in female patients; of these, ten were herpes zoster, zona or shingles, and three herpes labialis. The cases of zoster were remarkable from the fact that six of the ten cases occurred in children under ten years of age; of these four were females. The youngest was a girl aged eight months, with a well-marked thoracic herpes of the left side; next came a boy of three years, with a zoster of the right leg; the oldest patient was a woman of thirty-eight, with left thoracic and brachial zoster. The youngest patient reported with zoster in my last two analyses was three years

last year, and two and a half the previous year; the oldest, seventy-three. The patient aged eight months was the youngest I have ever seen with this affection. Neumann mentions five or seven months as the earliest date at which it has been seen. With us it was more common on the left side than on the right.

The treatment usually employed was dusting the surface with starch-powder, and sewing on a linen band well dusted with the same, which was to be left *in situ* for a week or so, allowing the eruption to dry up beneath; generally, some tonic treatment was also given, as most of these patients are in a poor condition; in none of the cases was neuralgia complained greatly of.

15. Pruritus.—The diagnosis of pruritus is always a most unsatisfactory one for the physician, because he is obliged to trust so entirely to the statements of the patient, with no guidance as to the cause, and often no visible signs to confirm the truth of what the sufferer says: quite as unsatisfactory is it also to treat in the majority of cases, for a whimsical patient may deceive the physician in regard to the effect of remedies. That we do constantly meet with cases which present no other symptom than an itching of the skin, is a well-assured clinical fact, and of such cases there were twelve recorded during the past year, eight males and four females. Of these, three were entered as pruritus ani, two pruritus senilis, one pruritus genitalium, one pruritus hiemalis, and in five there was simply general itching of the skin complained of. It will be remembered that we exclude lice as a cause of this itching, the cases due to them being mentioned under the term phthiriasis; nor do we intend, by the term pruritus, any cases of prurigo, as described by Hebra, and seen occasionally in this country, where there is a true papular lesion inseparably connected with the disease. We were also careful to exclude cases of urticaria.

The cases of pruritus ani were probably due to hemorrhoidal congestion, or possibly to worms. They were certainly greatly relieved by turpentine-injections. In cases of pruritus senilis, a faulty kidney action is frequently the exciting cause, and our patients generally are much benefited by acetate of potassa internally, and externally by a wash of

carbolic acid two drachms, caustic potash one drachm, and water four to eight ounces. The alterations of age in the skin are, however, undoubtedly an element in the causation of pruritus senilis, and only temporary relief can be expected.

There was but one case of the pruritus hiemalis observed, affecting the thighs of a young man aged twenty-three.

16. Impetigo Contagiosa.—Quite a number of cases of this curious disease were seen during the year, nine in all, three times in male and six times in female subjects. They mostly occurred in groups, two families having three patients in each, one two, and in one child, twenty-one months old, the disease could not be traced to any others. They all presented much the same features as described by Tilbury Fox, and recognized by others, except that the crusts may be more abundant and darker where the disease occurs among the poorer and dirtier classes. The cases were all in children under seven years of age, except in one instance, where a father acquired it from his child aged seven.

17. Epithelioma.—After considerable thought and study of the cases, I have decided to omit the term rodent ulcer (*ulcus erodens*), which appeared in my last report, and to include the lesions which might be thus named under the term epithelioma. My reasons are their close approach in clinical features, and the great similarity, if not identity, which has been shown between all these cases microscopically. Among older writers, lupus, especially its ulcerative form, has been frequently confounded with epithelioma, and *noli me tangere* has undoubtedly been used as a designation for both lupus and epithelioma; but, in the present instance, lupus has been carefully excluded.

Of the seven cases grouped as epithelioma, three were in men and four in women. The youngest and oldest patients were both women, aged respectively thirty and sixty-five years. In one case, a man aged forty-three, plastic operations had been performed four times by a leading surgeon, a large flap being taken from the forehead to replace a portion of the nose which was removed together with the disease. The destructive process had attacked the cicatrix, and an ulcerating epitheliomatous surface occupied both nostrils, extending

deep into them, also the left upper lip, which was drawn up by cicatricial action. Little could be done for the unfortunate case; acetate of zinc seemed for a while to check the ulceration, and it was thought some portions would heal, but no permanent results have been obtained. Of late he has used iodoform in ointment (℥ss ad ℥j), which he thinks checks the discharge and relieves the pain which the tense condition of the ulcerated surfaces induces.

Two of the cases were very successfully treated by means of Marsden's mucilage, in the manner described elsewhere[1] (equal parts of arsenious acid and powdered gum-acacia), and were followed to the result of a small, smooth, and healthy cicatrix. In one instance the single epitheliomatous structure, about a third of an inch in diameter, was situated at the junction of the left ala of the nose with the cheek, on a mason aged forty-one; in the other, a larger one was located on the right temple of a woman aged fifty. In one old woman of sixty-five, on whom there were two very superficial epitheliomata, one in the centre of the forehead, and one on the right temple, diluted citrine ointment (1 : 3) was employed as a placebo for a few days, under which they smoothed off, leaving surfaces so near to health that it was not deemed advisable to adopt any more severe application, and she continues its use occasionally.

18. Erythema.—Of the seven cases of erythema, three males and four females, three were of the variety multiforme, two of erythema nodosum, one erythema papulatum, and one from the effect of heat. Many of the cases were very transient in character, the result of digestive disorders. The two cases of erythema nodosum were in a boy aged eight years and a girl of fifteen.[2]

19. Purpura.—Seven cases of purpura were seen and treated during the past year, five in male and two in female patients. The ages of the patients were as follows: thirteen thirteen, seventeen, thirty-five, thirty-nine, forty, and forty-two years respectively. They were all treated with fluid extract of ergot, and as two of the cases have appeared in print

[1] New York Medical Journal, August, 1876.
[2] *Archives of Dermatology*, January, 1877, p. 133.

elsewhere,[1] with full comments on the use of the drug in these cases, I will not dwell on this here. I may, however, state in brief that it was employed both hypodermically and by the mouth with most striking results. Five of the cases were followed out; two failed to return after the first visit.

In one case, that of an anæmic girl of thirteen years, who had rheumatic symptoms very markedly developed, and who had far-advanced phthisis of the left lung, with distressing cough, the ergot was more slow in acting, but finally succeeded in checking the purpura, which developed anew on several occasions. She was under observation nearly six months, gradually failing with the lung-trouble, with which she finally died, as I learned from Dr. Billington, the visiting physician of the dispensary, five months after she disappeared from my clinic. He stated that the purpura ceased to appear some time before her death. While under my care she received also, from time to time, iron, quinine, and cod-liver oil; but the ergot was also administered more or less freely, as it seemed to check the purpura, and restrained somewhat the epistaxis, which occurred frequently.

In several patients it was observed and noted that marked improvement of the general health and color followed the use of the ergot alone, as in both the cases referred to as reported in the *Practitioner;* also in a broken-down barkeeper, aged forty, this effect of the ergot was very plain. In this case the eruption was checked at once, and had greatly faded at his second visit, at the expiration of seventy-two hours. From our study of the subject, as detailed in the article alluded to, we have concluded that ergot is the remedy *par excellence* for purpura, and that it should be employed at once and fearlessly, especially in cases of the hæmorrhagic form. It may be given by hypodermic injection, with more prompt results than by the mouth, and the fluid extract may be thrown beneath the skin in doses from ten to thirty minims, with perfect safety if due caution is observed.

20. Verruca.—Little remark is called for in regard to the six cases of warts which applied for treatment, with the single exception of a little girl of eleven years, whose warts were

[1] *The Practitioner* (London), November, 1876.

treated alone by arsenic, given internally, and with a good and rapid result. There were in all ten warts on her hands and face, and she was given four or five drops of De Valangin's solution of chloride of arsenic thrice daily, with no local applications. Three weeks after her first visit, it was recorded that several of the warts had disappeared, and, at the expiration of seven weeks, but one remained.

21. Hyperidrosis.—This peculiar functional disorder of the sweat-glands was presented for treatment in four cases, three males and one female. In one case, that of a young man of twenty, it was general, in another of the same age the head and neck were affected, and in two cases the feet were the seat of the disorder, the hands being also affected in one of the latter, a girl of fifteen years. In the first case very prompt results were obtained from the internal use of atropine, given in doses of about one-ninetieth of a grain thrice daily, which was increased to one-sixty-fourth of a grain in a few days. In the case of the sweating of the hands and feet of the girl of fifteen, one foot was painted once or twice a day with tincture of belladonna, which I have used heretofore with good success, and the other was kept wrapped all the time in the unguentum diachyli of the Germans. After a few days it was reported that both feet were doing very well, but a little later she concluded that the diachylon served the best, which was evident on examination, although the foot on which the belladonna had been employed was much better. The epidermis, which had been macerated by the profuse sweating, so as to be white and soggy, and tender to press upon, was hardened, and now walking gave no pain. The diachylon was continued to both feet, and a few weeks later the skin of the feet seemed normal, and she remains cured after about a month's treatment.

22. Lupus.—There were four cases of lupus observed during the year, all affecting the face of females. Two cases were of the erythematous variety, one of the scattered form, where isolated patches affected various parts of the face, also both ears, in a woman twenty-six years old. The other was in a girl of eleven years, where the whole face was very characteristically covered with lupus erythematosus, also the backs

of the hands in scattered papules, and the palmar surfaces of some of the fingers. There were also some scattered patches of small size on the top of the head.

Of the two cases of lupus vulgaris, one occurred in a woman aged forty-four, in whom it had lasted since thirteen years of age. The disease occupied the entire face and ears; it had destroyed the end of the nose, and produced some ectropion; the lips also were much thickened, and eating was somewhat difficult. The second case of lupus vulgaris was of small extent, and occupied the right side of the nose, near the bridge, in a woman forty years of age. The three first-mentioned cases came late in the year, and it would be premature to report anything in regard to their treatment. The last case came once in February, but has not returned.

23. Scrofuloderma.—Three cases were entered as scrofuloderma; thereby are indicated the strumous abscesses generally observed on the neck of those exhibiting the characteristics of scrofula. There were no features of particular interest in these cases.

24. Varicella.—The eruptive fevers are, as a rule, excluded from this class, and attended at their homes by the visiting physician. The only cases of them were the three of varicella, all in male children. They were of the usual mild character.

25. Adenoma.—Although not coming under the head of skin-diseases, this enlargement of the lymphatic glands may have closer connection with cutaneous lesions than is usually supposed; indeed, lymphadenoma cutis is now recognized as definite affection of the integument. In one of these cases, a boy aged five years, there was first a scrofulous eczema about the head, upon the disappearance of which the glands of the right side of the neck began to enlarge and harden, which process has continued steadily in spite of varied and appropriate treatment, until now the entire right side of the neck, from the angle of the jaw to the clavicle, is filled with a hardened lobulated mass; the skin over it is pale, the veins rather prominent. The boy's health is now evidently suffering, he has lost appetite, has become anæmic and weak, and is fast declining. In the other case, that of a boy three and

a half years old, there is a large mass of indurated glands in the left side of the neck, more than filling the space between the cheek and clavicle, which has steadily increased under observation, the boy gradually failing. The skin over this is in some places purplish, but apparently healthy, and the veins are enlarged and tortuous. Arsenic, which has proved serviceable for these swellings in the hands of some, has failed to remove the disease in these cases; likewise iodine, cod-liver oil, etc. In the case first mentioned, arsenic has given the most benefit.

26. Chloasma.—The brownish discoloration on the face which is sometimes confounded with the fawn-colored eruption on the breast, the parasitic tinea versicolor, was noted for treatment in but two cases, although it was observed a not inconsiderable number of times in females who came for other complaints. In one of these cases there was also xanthelasma or vitiligoidea at the same time, a combination which I do not remember to have ever met with before.

We have seldom found the following prescription to fail in removing these discolorations pretty promptly; though, of course, they may return again and again, generally from uterine or ovarian disease or hepatic derangement: ℞. Hydrarg. bichlor., gr. viij; boracis pulv., ʒij; acidi acetici dil., ʒij; alcohol, ℥ij; aquæ ad ℥iv. M. If it roughens the skin too much, omit its use for a few days, and apply sweet cream.

27. Ichthyosis.—Two boys, aged three and ten years respectively, were brought in the month of May with this peculiar and incurable disease. In the case of the boy aged ten,[1] it was recorded that it had lasted since he was two years old. I cannot find notes of the other case. They were both seen but once, and were given alkaline and starch baths, with subsequent inunctions of cosmoline.

28. Xanthelasma.—One of the two cases of xanthelasma, in a woman aged fifty-eight, exhibited the disease in a very marked and extensive degree. The whole face, extending from ear to ear, and from the chin to within half an inch of the roots of the hair, with the exception of a portion of the

[1] *Archives of Dermatology*, January, 1877, p. 135.

cheeks, was covered with a scattered, cream-colored eruption of spots, varying in size from a line to a quarter of an inch in diameter, circular and of irregular shape. The surface of these was smooth and shiny, and soft and velvety to the feel. There is slight elevation. In the other case, that of a woman of thirty, the disease was much less pronounced, and occupied mainly the eyelids, and, to slight extent, the side of the nose.

Both patients were constipated. The first one once had been subject to "bilious attacks," and the second one had jaundice as a girl.

29. Abscessus.—There was nothing of interest in the one case of dermic abscess treated.

30. Alopecia Areata.—But a single case of alopecia areata was entered during the year,[1] and this in a young girl of nineteen, in whom the disease had carried off nearly the entire mass of hair, leaving the head almost as if shaved. The history was that it began as a small spot, an inch or so in diameter when first noticed, which was followed by others very shortly, all of which coalesced to produce wellnigh perfect baldness; there were still some islets of hair, and a few scattered hairs over the bald portions, as is not unfrequently the case. The ordinary stimulating treatment was employed with fair success for a time, but she ceased attendance before the real result could be learned.

31. Carcinoma.—The disease in this case was seated on the right breast of a married woman aged fifty; the case was transferred to the surgical department for operation.

32. Eruptio e Copaiba.—A young man twenty-four years old, who was being treated in the surgical department for gonorrhœa, and was taking copaiba pretty freely, presented himself with a papulo-erythematous eruption covering almost the entire surface of the body. It possessed neither the characters of erythema exclusively, nor those of urticaria; it was composed of erythematous blotches, somewhat raised, of irregular shape and size, some round, some irregular, the elements of it being very symmetrically distributed on each side of the trunk. The upper arms and thighs were affected, as also the head and neck. All of the spots were of a uni-

[1] *Archives of Dermatology*, July, 1876, p. 312.

form pink color; they were quite closely set; they had existed a day or two without much change, and they gave rise to very considerable burning and itching, especially when exposed to the air; there had been no disappearance of individual blotches, with reappearance of others, as in urticaria. He was advised to desist from copaiba for a few days, and take Rochelle salts several times daily.

33. Morphœa.—Of this remarkable affection, which has but recently acquired a definite place in dermatological literature, there was one very marked and almost typical case, in the person of a well-developed and apparently healthy single woman, of thirty years.[1] She first came to the dispensary February 29, 1876, and has attended quite faithfully ever since. The disease began about twelve months previous to the first visit, and had increased steadily up to that time. When first seen there was a patch of diseased skin on the right leg, commencing about four inches above the popliteal space, and extending downward and forward to within two inches of the internal malleolus. The diseased surface was of a dirty yellowish-brown color, mottled, surrounded by an erythematous, pinkish halo, which was well defined toward the yellow skin, and shaded off insensibly into the healthy color of the adjacent surface. In feeling, the yellow portions were hard, as if a piece of boiled sole-leather had been inserted into the skin, and the margin of the disease could be detected by simply passing the finger from the healthy to the affected part, with very slight pressure. The entire diseased tissue was irregular in shape, as if composed of several isolated patches, and latterly there have appeared several scattered spots of redness on the lower part of the thigh, in the centre of one of which has formed the yellowish-brown, sole-leather-like, hardened skin. There is, perhaps, a very slight depression of surface in some of the older portions, but in the main the diseased is about on a level with the healthy skin; there is no tendency to contract, as is so markedly the case in scleroderma.

34. Nævus.—But one case of nævus was entered, although I recall several occurring on patients treated for other diseases.

[1] *Archives of Dermatology*, January, 1877, p. 102.

This was in a male infant of fifteen months, who had a single vascular nævus on the radial surface of the right forearm, near the thumb; the child was seen but once, and no active treatment attempted.

35. Pemphigus.—A girl aged sixteen exhibited this disease in a very severe, gangrenous form; she died about six months after being first seen, with well-pronounced and rapid phthisis.

36. Pigment-Staining.—On the inner and anterior surface of the left leg of a sailor aged thirty-four, there was observed a brownish pigmentation, covering nearly half the surface of the lower half of the leg, which was apparently without cause, as the patient, who was a very intelligent man, gave no history of a previous eczema, syphilis, or ulceration. The veins were varicose to a moderate degree.

37. Pityriasis Rubra.—One case was recorded with this disease, a woman aged forty-five; but, as no notes were made of the case, the details cannot be given.

38. Roseola.—No especial interest attaches to this case, which occurred in a boy of six years.

39. Strophulus Pruriginosus.—This case approaches the most nearly to what is known as true prurigo, of any which appeared at the clinic; but, because of the excessive rarity of the affection in this country, I should hardly be willing to name it prurigo until after longer observation, and have, therefore, following Hardy, called it strophulus pruriginosus. It occurred in a female child, seventeen months old, who exhibited a papular eruption, covering especially the thighs and feet, but also to a lesser degree the body and arms. The papules were many of them scratched, but there were some of a flesh-color, and more perceptible by feel than by sight. There was very considerable improvement under the sirup of the iodide of iron, and an application consisting of two drachms of tar-ointment to six of zinc-ointment.

In concluding this *résumé* of my year's work in the Demilt Dispensary, I would commend to my colleagues and to all occupying public positions, and indeed to every practitioner, the habit of recording, to the utmost possible degree, facts in

relation to disease and its treatment. Cases which at the outset seem of the least interest are often found to possess the greatest when it is too late to obtain the exact data in regard to them; and many will agree with me, that very frequently therapeutical and other items which, while the case is fresh, appear of the greatest importance, have been lost because not recorded at the time.

No one is better aware than myself of the very great difficulty of accomplishing this, and no one can appreciate more than I do the imperfections of this present analysis and study; but, as remarked in my last year's report, it is put forth as it is, with the desire "to add the results of American experience in the observation and treatment of diseases of the skin, and to excite, if possible, more interest in their study." This glance back over the labors of the year has been a most pleasant and profitable one to me, and I trust may not be without advantage to others as well.

ANALYSIS

OF

EIGHT THOUSAND CASES

OF

SKIN DISEASE

BY

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ANALYSIS OF 8,000 CASES OF SKIN DISEASE.

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WHILE statistical details appear at first sight to be of comparatively little service, they are of undoubted value as a contribution to the medical history of a country and nation, and as a means of comparing its diseases with those in other lands; in the present instance the attempt will be made to use the presentation of figures as a basis from which practical conclusions may be drawn from the cases here analyzed.

The following tables are taken from records of eight thousand personal cases of diseases of the skin, of which 2,583 were observed in private practice, and 5,417 in my clinics in the Demilt Dispensary, and the out-patient departments of the New York and Bellevue hospitals. The many cases seen in other institutions and casually in hospitals and elsewhere are not included, because records of them have not been kept with sufficient accuracy. A portion of these cases have been included in clinical reports published some years since,[1] and brief mention is made of

[1] "Analysis of 1,000 Cases of Skin Disease," *American Practitioner*, May, 1875.
"Analysis of 617 Cases of Skin Disease," *American Practitioner*, April, and May, 1876.
"Analysis of 774 Cases of Skin Disease," *New York Medical Journal*, April and June, 1877.

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the total number in my recent "Manual of Diseases of the Skin"; a more extended consideration is here offered. The cases are arranged in two tables. Table I exhibits the diseases in alphabetical arrangement, and gives also the sex of the patients, and the number in each class of practice separate.

TABLE I.

DISEASES ARRANGED IN ALPHABETICAL ORDER.

Disease.	Private Practice.			Public Practice.			Grand Totals.
	Males.	Females.	Total.	Males.	Females.	Total.	
Abscessus	....	1	1	9	7	16	17
Acne	150	370	520	169	284	453	973
Adenoma	....	....	....	4	1	5	5
Alopecia	46	23	69	13	7	20	89
Anthrax	5	1	6	3	2	5	11
Atrophia cutis	2	2	4	2	....	2	6
Bromidrosis	....	1	1	2	....	2	3
Cacotrophia cutis	....	2	2	....	....	....	2
Canities	1	1	2	....	1	1	3
Carcinoma cutis	....	2	2	....	3	3	5
Cellulitis	....	....	....	1	2	3	3
Chloasma	2	30	32	....	10	10	42
Clavus	....	....	....	3	4	7	7
Congestio folliculorum	....	....	....	....	1	1	1
Cornu cutaneum	1	....	1	1	....	1	2
Dermatalgia	1	1	2	....	....	....	2
Dermatitis	20	14	34	66	72	138	172
Dermatitis exfoliativa	2	....	2	3	1	4	6
Dysidrosis	2	1	3	1	3	4	7
Ecthyma	....	1	1	10	7	17	18
Eczema	529	349	878	873	928	1,801	2,679
Elephantiasis Arabum	....	1	1	....	2	2	3
Ephelide	....	1	1	....	....	....	1
Epithelioma	26	19	45	24	17	41	86
Erysipelas	3	3	6	31	54	85	91
Erythema	16	24	40	27	61	88	128
Excoriationes	....	....	....	2	1	3	3
Folliculitis capitis	....	....	....	1	....	1	1
Furunculus	15	13	28	58	65	123	151
Hæmophilia	....	....	....	1	....	1	1
Herpes	14	7	21	26	23	49	70
Hydroa	5	1	6	2	1	3	9
Hyperæsthesia cutis	....	....	....	2	....	2	2
Hyperidrosis	5	3	8	11	8	19	27
Hypertrichosis	1	23	24	....	....	....	24
Ichthyosis	10	5	15	7	6	13	28
Impetigo	....	....	....	5	8	13	13
Impetigo contagiosa	2	5	7	7	12	19	26
Impetigo herpetiformis	....	2	2	....	....	....	2
Keloid	3	4	7	4	....	4	11
Lentigo	1	2	3	....	....	....	3
Lepra	4	....	4	2	....	2	6
Leucoderma	9	8	17	2	1	3	20
Lichen	29	15	44	43	61	104	148
Lupus	11	21	32	7	30	37	69
Lymphadenoma	....	1	1	....	....	....	1
Lymphangioma	....	....	....	1	1	2	2
Macula pigmentosa	....	....	....	2	....	2	2
Miliaria	....	....	....	1	....	1	1
Morbilli	1	3	4	....	1	1	5
Morphœa	1	4	5	1	2	3	8

TABLE I.—*Continued.*

Disease.	Private Practice.			Public Practice.			Grand Totals.
	Males.	Females.	Total.	Males.	Females.	Total	
Nævus	4	12	16	3	7	10	26
Neuroma	....	....	....	2	....	2	2
Onychatrophia	....	....	....	2	....	2	2
Onychia	2	4	6	6	5	11	17
Papilloma	3	....	3	2	....	2	5
Paronychia	....	....	....	1	4	5	5
Pemphigus	3	7	10	2	5	7	17
Phlegmon	....	....	....	1	....	1	1
Phthiriasis	3	8	11	155	231	386	397
Pityriasis	5	12	17	4	14	18	35
Pompholix	4	....	4	....	....	....	4
Prurigo	...	1	1	....	....	....	1
Pruritus	23	17	40	55	57	112	152
Psoriasis	77	54	131	92	110	202	333
Purpura	9	2	11	12	16	28	39
Rhinoscleroma	....	1	1	....	....	....	1
Roseola	....	....	....	1	5	6	6
Rötheln	3	8	11	....	1	1	12
Sarcoma	2	....	2	1	....	1	3
Scabies	9	1	10	66	52	118	128
Scarlatina	....	1	1	....	....	....	1
Scleroderma	1	2	3	....	1	1	4
Scrofuloderma	1	2	3	14	13	27	30
Strophulus pruriginosus	....	....	....	....	1	1	1
Sycosis	15	....	15	12	....	12	27
Syphilis	92	61	153	344	302	646	799
Syphilophobia	....	....	....	....	1	1	1
Telangiectasis	....	1	1	....	1	1	2
Tinea	87	37	124	142	94	236	360
Trichorexis nodosa	4	....	4	....	....	....	4
Tumor	....	....	....	1	2	3	3
Tylosis	....	....	....	....	1	1	1
Ulcus	8	6	14	88	79	167	181
Urticaria	14	30	44	62	93	155	199
Vaccinia	....	....	....	2	....	2	2
Varicella	3	3	6	9	6	15	21
Varicella prurigo	....	....	....	2	....	2	2
Variola	4	1	5	....	....	....	5
Varioloid	....	....	....	1	....	1	1
Verruca	5	9	14	30	11	41	55
Xanthoma	2	4	6	1	3	4	10
Xeroderma	4	2	6	2	2	4	10
Zoster	14	12	26	30	32	62	88
Doubtful diagnosis	2	1	3	5	4	9	12
	1,320	1,263	2,583	2,577	2,840	5,417	8,000

Table II presents the diseases arranged in the order of their relative frequency, and shows the percentage of each. This table enables a comparison of the proportion of various diseases in private and public practice, which will be found to vary very considerably in some instances. Thus acne forms 20 per cent. of cases in private practice, and only 8 per cent. of those in public practice; syphilis was presented but half as often in private as in public practice; the animal parasitic affections were very seldom seen among private cases, whereas the vegetable parasitic diseases occurred in about equal frequency in both, etc.

TABLE II.

DISEASES ARRANGED IN THE ORDER OF THEIR RELATIVE FREQUENCY.

Disease.	Private Practice.		Public Practice.		Totals.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
1 Eczema {infantile ..... / over 5 years of age.	115 / 763 } 878	33.99	488 / 1,313 } 1,801	33.24	603 / 2,076 } 2,679	33.48
2 Acne {sebacea ..... / punctata ..... / molluscum ..... / simplex ..... / indurata ..... / rosacea	68 / 14 / 6 / 226 / 56 / 150 } 520	20.13	40 / 45 / 2 / 212 / 53 / 101 } 453	8.33	108 / 59 / 8 / 438 / 109 / 251 } 973	12.16
3 Syphilis	153	5.93	646	11.88	799	9.99
4 Phthiriasis {capitis ..... / corporis ..... / pubis ..... / phthiriophobia ... /	7 / 1 / 3 / .. / .. } 11	.43	221 / 146 / 5 / 3 / 11 } 386	7.1	228 / 147 / 8 / 3 / 11 } 397	4.96
5 Tinea {trichophytina {capitis ... / barbæ ... / corporis. / cruris ... } / versicolor ..... / favosa ..... / onychia parasitica.	31 / 8 / 27 / 25 / 30 / 3 / .. } 124	4.8	43 / 16 / 80 / 11 / 57 / 28 / 1 } 236	4.34	74 / 24 / 107 / 36 / 87 / 31 / 1 } 360	4.5
6 Psoriasis	131	5.07	202	3.72	333	4.16
7 Urticaria	44	1.66	155	2.85	199	2.49
8 Ulcus {venereum ..... / simplex	4 / 10 } 14	.54	46 / 121 } 167	3.08	50 / 131 } 181	2.26
9 Dermatitis {simplex ..... / venenata ..... / medicamentosa .. / calorica ..... / traumatica	11 / 13 / 9 / 1 / .. } 34	1.3	48 / 27 / 8 / 27 / 28 } 138	2.55	59 / 40 / 17 / 28 / 28 } 172	2.15
10 Pruritus {hiemalis, ... / senilis ..... / gravidarum ..... /	15 / 2 / 1 / 22 } 40	1.55	8 / 20 / 1 / 83 } 112	2.07	23 / 22 / 2 / 105 } 152	1.9
11 Furunculus	28	1.08	123	2.27	151	1.89
12 Lichen {simplex ..... / planus ..... / pilaris ..... / scrofulosorum	30 / 12 / 1 / .. } 44	1.72	87 / 12 / 4 / 1 } 104	1.9	117 / 24 / 5 / 1 } 148	1.85
13 Erythema {multiforme .... / simplex ..... / nodosum ..... / scarlatiniforme	24 / 11 / 4 / 1 } 40	1.55	37 / 41 / 9 / 10 } 88	1.63	61 / 52 / 13 / 2 } 128	1.6
14 Scabies	10	.39	118	2.18	128	1.6
15 Erysipelas	6	.23	85	1.57	91	1.14
16 Alopecia {areata ..... /	32 / 37 } 69	2.67	14 / 6 } 20	.37	46 / 43 } 89	1.11
17 Zoster	26	.91	62	1.14	88	1.10
18 Epithelioma	45	1.74	41	.76	86	1.08

TABLE II.—*Continued.*

Disease.	Private Practice.		Public Practice.		Totals.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
19 Herpes febrilis	4		36		40	
progenitalis	13		6		19	
gestationis	4		..		4	
lab. maj	..	21 .81	1	49 .9	1	70 .87
nasalis	..		1		1	
linguæ	..		1		1	
..	..		4		4	
20 Lupus erythematosus	20	32 1.24	22	37 .68	42	69 .86
vulgaris	12		15		27	
21 Verruca senilis	3	14 .54		41 .76		55 .7
..	11					
22 Chloasma		32 1.24		10 .18		42 .53
23 Purpura simplex	7		21		28	
hæmorrhagica	2	11 .43	4	28 .52	6	39 .49
rheumatica	2		3		5	
24 Pityriasis		17 .66		18 .33		35 .43
25 Scrofuloderma		3 .12		27 .5		30 .38
26 Ichthyosis congenital	2	15 .58		13 .24		28 .35
..	13					
27 Hyperidrosis		8 .31		19 .35		27 .34
28 Sycosis		15 .58		12 .22		27 .34
29 Impetigo contagiosa		7 .27		19 .35		26 .33
30 Nævus vasculosus	10		9		19	
pilosus	2	16 .62	1	10 .18	3	26 .33
pigmentosus	2		..		2	
aranæus	2		..		2	
31 Hypertrichosis		24 .93	.....	....		24 .3
32 Varicella		6 .23		15 .28		21 .28
33 Leucoderma		17 .66		3 .055		20 .25
34 Ecthyma		1 .039		17 .31		18 .22
35 Abscessus		1 .039		16 .3		17 .21
36 Onychia		6 .23		11 .2		17 .21
37 Pemphigus		10 .39		7 .13		17 .21
38 Impetigo		.. ....		13 .24		13 .18
39 Rötheln		11 .43		1 .018		12 .15
40 Anthrax		6 .23		5 .09		11 .14
41 Keloid		7 .27		4 .07		11 .14
42 Xanthoma		6 .23		4 .07		10 .12
43 Xeroderma		6 .23		4 .07		10 .12
44 Hydroa		6 .23		3 .055		9 .11
45 Morphœa		5 .19		3 .055		8 .10
46 Clavus		.. ....		7 .13		7 .09
47 Dyshidrosis		3 .12		4 .07		7 .09
48 Atrophia cutis		4 .15		2 .037		6 .075
49 Dermatitis exfoliativa		2 .076		4 .07		6 .075
50 Lepra		4 .15		2 .037		6 .075
51 Roseola		.. ....		6 1.11		6 .075
52 Adenoma		.. ....		5 .09		5 .062
53 Carcinoma cutis		2 .078		3 .055		5 .062
54 Morbilli		4 .15		1 .018		5 .062
55 Papilloma		3 .12		2 .037		5 .062
56 Paronychia		.. ....		5 .09		5 .062
57 Variola		5 .19	.....	....		5 .062
58 Pompholix		4 .15	.....	....		4 .05
59 Scleroderma		3 .12		1 .018		4 .05
60 Trichorexis nodosa		4 .15	.....	....		4 .05
61 Bromidrosis		1 .039		2 .037		3 .042
62 Canities		2 .078		1 .018		3 .042
63 Cellulitis		.. ....		3 .055		3 .042
64 Elephantiasis Arabum		1 .039		2 .037		3 .042
65 Excoriationes		.. ....		3 .055		3 .042
66 Lentigo		3 .12	.....	....		3 .042
67 Sarcoma		2 .078		1 .018		3 .042
68 Tumor		.. ....		3 .055		3 .042
69 Acotrophia cutis		2 .076	.....	....		2 .025
70 Cornu cutaneum		1 .093		1 .018		2 .025
71 Dermatalgia		2 .078	.....	....		2 .025
72 Hyperæsthesia cutis		.. ....		2 .037		2 .025

TABLE II.—*Continued.*

Disease.	Private Practice.		Public Practice.		Totals.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
73 Impetigo herpetiformis	2	.078	.....	....	2	.025
74 Lymphangioma	..	....	2	.037	2	.025
75 Macula pigmentosa	..	....	2	.037	2	.025
76 Neuroma	..	....	2	.037	2	.025
77 Onychatrophia	..	....	2	.037	2	.025
78 Telangiectasis	1	.078	1	.018	2	.025
79 Vaccinia	..	....	2	.037	2	.025
80 Varicella prurigo	..	.. .	2	.037	2	.025
81 Congestio folliculorum	..	. ..	1	.018	1	.0125
82 Ephilide	1	.039	....	....	1	.0125
83 Folliculitis capitis	..	....	1	.018	1	.0125
84 Hæmophilia	..	...	1	.018	1	.0125
85 Lymphadenoma	1	.039	.....	....	1	.0125
86 Miliaria	..	...	1	.018	1	.0125
87 Phlegmon	..	....	1	.018	1	.0125
88 Prurigo	1	.039	.....	....	1	.0125
89 Rhinoscleroma	1	.039	....	....	1	.0125
90 Scarlatina	1	.039	.....	...	1	.0125
91 Strophulus pruriginosus	..	....	1	.018	1	.0125
92 Syphilophobia	..	....	1	.018	1	.0125
93 Tylosis	..	....	1	.018	1	.0125
94 Varioloid	..	....	1	.018	1	.0125
95 Doubtful diagnosis	3	.12	9	.16	12	.15
	2,583	....	5,417	....	8,000	....

Ninety-four separate names of disease-states are found in the first table, and in the second table several of these are seen to be further subdivided, so that the total number of distinct eruptions here presented will number more than one hundred.

In regard to the nomenclature here employed, it may be mentioned that the aim has been to employ only well-known names, and to adhere to the rule of using a Latin terminology. For many years the cases have been recorded on a scheme of nomenclature and classification prepared by the writer for teaching, and the adoption of a definite and determined plan has aided much in securing records which, while made solely for practical utility in dealing with the cases, could be used in forming the present tables of statistics.

It will be observed that many affections appear less frequently than others; this, in many instances, is due to the comparative rarity of the eruption, while in other instances it is because the complaint is not such as would be

likely to be presented at a clinic for treatment. Thus, prurigo, rhinoscleroma, morphœa, scleroderma, and lepra, with other diseases, are very rare in this country, whereas the exanthemata seldom appear because of the nature of the statistics, which are drawn from special consulting practice, while minor affections, as pigmentary anomalies, and others are rarely presented on account of their trivial character. The patients were remarkably evenly divided in regard to sex—3,897 males to 4,103 females; very considerable differences, however, appear in regard to different affections. Thus, chloasma was observed almost exclusively in females, while the cases of sycosis all occurred in males, as this eruption belongs mainly to the bearded face. Acne was presented for treatment twice as frequently in females as in males, whereas double the number of males were seen for alopecia. In eczema, lichen, psoriasis, and syphilis the number of each sex was nearly the same. Other differences will be noted in connection with various eruptions.

The ages of the patients applying for treatment are shown in the next table, recording all the private cases and those occurring in public practice, with the exception of cases observed during the years 1874 and 1875, the records of which are not now accessible. The same restrictions apply also to subsequent tables: but Tables I and II include these years, as these general statistics had been already incorporated in the reports previously alluded to. It will be seen that the largest number of cases belonging to any period of five years is found in that from twenty to twenty-five years of age, the total then being 787; this is even greater than during the first five years of life, which gave 779 cases. This is not a little remarkable, considering the large number of individuals living between one and five years old, as compared to those living between twenty and twenty-five years of age, and also considering the delicacy of the infant's skin and the readiness with which it is supposed to be affected, as compared with that of adults. The least number of cases in any period of five years appears to be that between ten and fifteen years of age,—that is, considering the number of individuals living,—namely, only

TABLE III.

AGES OF PATIENTS WITH GENERAL SKIN DISEASES.

Age.	Private Practice.			Public Practice.			Grand Totals.
	Males.	Females.	Total.	Males.	Females.	Total.	
6 months and under	29	21	50	48	51	99	149
6 months to 1 year	18	8	26	31	38	69	95
1 year to 2 years	18	13	31	71	65	136	167
2 years to 3 years	10	11	29	70	58	128	157
3 " " 4 "	10	9	19	42	46	88	107
4 " " 5 "	9	15	24	47	33	80	104
	102	77	179	309	291	600	779
5 years to 10 years	34	60	94	150	203	353	447
10 " " 15 "	19	52	71	105	190	295	366
15 " " 20 "	72	166	238	175	237	412	650
20 " " 25 "	120	224	344	266	177	443	787
25 " " 30 "	185	197	382	193	155	348	730
30 " " 35 "	182	122	304	151	110	261	565
35 " " 40 "	155	103	258	115	138	253	511
40 " " 45 "	129	83	212	82	91	173	385
45 " " 50 "	92	53	145	94	127	221	366
50 " " 55 "	69	40	109	64	78	142	251
55 " " 60 "	63	31	94	71	76	147	241
60 " " 65 "	39	27	66	40	24	64	130
65 " " 70 "	32	14	46	25	29	54	100
70 " " 75 "	20	9	29	7	7	14	43
75 " " 80 "	4	3	7	8	3	11	18
80 " " 85 "	1	2	3	3	3	6	9
85 " " 90 "	2	....	2	....	1	1	3
90 " " 95 "	....	....	....	....	....	....	....
95 " " 100 "	....	....	....	....	1	1	1
Unknown age	....	....	....	....	1	1	1
	1,320	1,263	2,583	1,858	1,942	3,800	6,383

366, and the sudden increase between the ages of fifteen and twenty, to 650 cases, is not a little striking. This table may be advantageously studied in connection with those exhibiting the ages of patients with individual diseases, as we shall see later when speaking of the more common affections.

We may now pass to a brief consideration of some of the more important diseases, taking them up in the order of their relative frequency.

I. **Eczema.**—A glance at the tables will readily show that eczema holds the first place in point of frequency, as it certainly does in regard to the amount of distress occasioned. In Table II it is seen to form 33.99 per cent. of the private cases, and 33.24 per cent. of those seen in public practice, with a total of 33.48 per cent. in the entire 8,000 cases.

But this alone gives a very slight idea of its real frequency at different periods of life, which is by no means uniform. In the accompanying table (IV) are presented the ages of 2,500 patients with eczema, and from it may be

TABLE IV.

AGES OF 2,500 PATIENTS WITH ECZEMA.

Age.	Males.	Females.	Total.
6 months and under	60	49	109
6 months to 1 year	43	39	82
1 year to 2 years	84	62	146
2 years to 3 "	67	62	129
3 " " 4 "	45	43	88
4 " " 5 "	28	32	60
Total infantile eczema	327	287	614
5 years to 10 years	99	117	216
10 " " 20 "	89	154	243
20 " " 30 "	177	162	339
30 " " 40 "	198	140	338
40 " " 50 "	154	158	312
50 " " 60 "	141	117	258
60 " " 70 "	79	56	135
70 " " 80 "	22	15	37
80 " " 90 "	2	3	5
90 " " 100 "	....	1	1
Unknown age	....	2	2
	1,288	1,212	2,500

judged the susceptibility of different years of life to the disease. A still more correct knowledge of the natural history of the affection may be obtained by a comparison of this table with the preceding, representing the general run of cases as they are presented for treatment. Thus we find that of the 779 cases of general skin affections occurring during the first five years of life, no less than 614, or almost 80 per cent. were cases of eczema; whereas in the next five years there were but 216 cases of eczema in a total of 447 miscellaneous skin cases, or less than 50 per cent. The average for this first decade of life gives 67 per cent. of all cases. In the next decade, that between ten and twenty years, 243 cases of eczema are found among 1,016 skin patients, or hardly 24 per cent.; still later, in the years between twenty and thirty, there were but 339 cases of eczema among 1,517 of all skin affections, or a little over 20

per cent.; in the following decade, that between thirty and forty, eczema formed over 30 per cent.; between forty and fifty, almost 40 per cent.; between fifty and sixty, over 52 per cent.; and between sixty and seventy years of age, almost 60 per cent. of all skin cases were those of eczema.

We thus see that during the earlier and later years of life the skin is most prone to take on eczematous action, while, as we will observe later, other affections belong rather to the period of early youth, others again to middle age, and still others to senility. The youngest patient treated with eczema was about ten days old, the oldest was said to be ninety years: between these ages almost every month was represented; there were forty-three patients with eczema who were seventy or more years of age.

In regard to sex, the patients were pretty evenly divided, 1,288 males to 1,212 females, although at different periods the proportion of each sex varied considerably. Thus in the decade between ten and twenty the females were almost double in number, owing probably in part to the influence of the development of the menses, whereas in the next decade the males were considerably in excess.

Little can be here said in regard to the phases of the eruption in these cases, or its location, but it can be readily understood that every conceivable form and variety of lesion is comprehended, from a single, hardened, localized, chronic patch of thickened skin, to a general, chronic, inflammatory eruption, involving a large area or the entire integument; or from a subacute, reddened surface, giving off a little moisture or scaling over, to an acutely inflamed, perhaps œdematous, exuding condition, affecting an extremity, the face, or much of the body. In regard to locality, every portion of the integument has been observed to be affected, from the crown to the sole.

With such a vast variety of manifestations, presenting all stages and conditions of inflammatory action, and located on different portions of the body, and on individuals with skins of various qualities, it is readily understood that very little can be said in a general way in regard to the treatment of the cases analyzed, or of the disease in general. Any

one who has had any amount of experience in managing eczema will appreciate the impossibility of indicating in the slightest degree a line of practice which will be serviceable in every case, or even in any proportion of those which may present themselves. The inutility and even harmfulness of prescriptions which sometimes are quoted as "good for eczema" must be apparent to any one who will give thought to the matter.

Suffice it to say in regard to the mangement of the cases here tabulated, that the treatment embraced the most varied means and measures suitable to the conditions present and to the individuals affected. Eczema, of all skin affections, is one, the conduct of whose treatment must be based on the broadest knowledge of medicine and the most judicious employment of remedies.[1]

II. **Acne.**—The next most frequent affection in our list is acne, with a total of 973 cases, or 12.16 per cent. of the whole. The proportion of cases in private and public practice was quite different, it forming over 20 per cent. in the former, and only 8.33 per cent. among the poorer classes. This difference is undoubtedly in part caused by over-eating, sedentary habits, and other agencies which engender it among the rich, but also partly owing to the fact that the poor care less for the disfigurement of acne and have less time to devote to the removal of conditions which do not cause bodily suffering. Acne is probably much more common even than would be indicated by the figures here given, inasmuch as a very considerable proportion of individuals suffer from it to a greater or less degree during youth, or later, but the eruption is is too often regarded not as a disease but rather as a necessary attendant of adolescence, or as a condition which cannot be relieved. The eruption is, in many young persons, a troublesome one to permanently remove, but great care can, in the large majority of instances, either cause the lesions to disappear or to be much diminished, and prolonged attention can very commonly ensure immunity from it. In the present study acne is used to in-

[1] For a full and practical study of the disease and its treatment, based on the cases here analyzed, the reader is referred to the recent work by the writer on "Eczema and its management," New York: G. P. Putnam's Sons, 1881.

clude all the affections of the sebaceous glands, both functional and inflammatory: in Table II the number of instances of each variety is indicated.

TABLE V.

AGES OF PATIENTS WITH ACNE.

Age.	Private Practice.			Public Practice.			Grand Totals.
	Males.	Females.	Total.	Males.	Females.	Total.	
Under 15 years of age	4	15	19	5	35	40	59
15 years to 20 years	30	81	111	59	81	140	251
20 " " 25 "	37	109	146	40	59	99	346
25 " " 30 "	28	73	101				
30 " " 35 "	12	32	44				
35 " " 40 "	11	34	45	over	thirty	years	of age
40 " " 45 "	8	17	25	23	40	63	206
45 " " 50 "	7	3	10				
50 " " 55 "	6	5	11				
55 or more years of age	7	1	8				
	150	370	520	127	215	342	862

Table V exhibits the ages at which the acne was observed in all of the private cases, and those occurring in public practice during the last seven years. It will here be seen, as is well known, that acne is an affection of early life, occurring principally between the ages of fifteen and thirty years. It also shows, what is not generally recognized, that acne in some of its forms is also not uncommonly seen after thirty years of age, and may be met with even after the age of fifty: thus in private practice 143 out of the 520 cases, or almost 30 per cent., were thirty or more years of age.

In regard to sex the cases were very unevenly divided: of the 973 cases, 319 occurred in males to 654 in females, as shown in Table I. This disparity between the sexes was more marked among the private cases, where the males formed only 28 per cent. of the entire number. The causes are many which operate to cause a larger proportion of females than males to appear in these statistics. First, undoubtedly, must come the fact that men pay far less attention to such eruptions as do not cause them physical annoyance than do females, and this is shown in the fact that those males who do apply for relief are not nearly so faith-

ful in carrying out directions and persisting in treatment as are the females.

But my observations among patients and others have led me to believe that acne is far less common among males than among females, and a number of reasons for this can readily be found. The sedentary habits of females largely predispose to the sluggish circulation and the consequent dyspepsia and constipation and imperfect tissue-interchange which are at the bottom of very many cases; the greater disturbances of the system which occur at puberty and the menopause contribute also largely to the production of acne in females. As a local element, may be mentioned the greater tendency in females to make applications to the face, in the way of perfumes, powders, and cosmetics, which undoubtedly greatly tend to develop the eruption.

After the age of thirty it will be noticed that the proportion of males to females increases, and in private practice the numbers at this period are almost equal; a reason of this is found in the larger indulgence in fermented and distilled liquors, and in injury from abuse of tobacco, and the increase of dyspepsia, together with a lowered vitality from over-strain. These cases in later life are, as is known, mostly included under acne rosacea.

III. **Syphilis.**—The relative position of syphilis in a table exhibiting the frequency of disease will vary very much with the source from which the statistics are drawn. In the present instance syphilis is viewed in relation to its cutaneous manifestations, and the cases came under observation mostly because of skin symptoms, although at the New York Hospital, where a thousand and more of the cases were seen, the clinic includes venereal and skin diseases.

But syphilis may be looked upon from its dermatological aspect better than in connection with any other class of diseases, because it is very rarely the case that the patient entirely escapes skin symptoms, even if we exclude the primary lesion, whereas there is no other structure so universally affected. A purely venereal service would afford but very little real information in regard to the frequency of the disease in the way of comparison, whereas when the

skin becomes affected, many who had before been under treatment by druggists or by means of remedies obtained from friends, will seek relief from the skin lesions: further, the uncertainty attending the true nature of local sores early in their course would always give an element of uncertainty in purely venereal statistics.

The total percentage of syphilitic cases is seen to be 9.99, but the difference between the ratio in public and private practice, as shown in Table II, is striking; the disease occurring just twice as frequently in the former as in the latter, 5.93 per cent. in private, and 11.88 per cent. in public practice.

The ages at which the disease was observed are shown in Table VI. Thirty-seven cases are seen to have occurred

TABLE VI.

AGES OF PATIENTS WITH SYPHILIS.

Age.	Private Practice.			Public Practice.			Grand Totals.
	Males.	Females.	Total.	Males.	Females	Total.	
6 mos. and under	....	2	2	7	7	14	16
6 mos. to 1 yr.	1	....	1	2	6	8	9
1 yr. " 2 yrs.	....	....	....	1	2	3	3
2 yrs. " 3 "	1	1	2	....	1	1	3
3 " " 4 "	....	....	....	....	1	1	1
4 " " 5 "	....	....	....	....	1	1	1
	2	3	5	10	18	28	33
5 yrs. to 10 yrs.	....	1	1	1	2	3	4
10 " " 15 "	....	....	....	4	3	7	7
15 " " 20 "	2	3	5	30	19	49	54
20 " " 25 "	10	14	24	85	34	119	143
25 " " 30 "	13	12	25	53	30	83	108
30 " " 35 "	23	12	35	47	27	74	109
35 " " 40 "	15	6	21	25	28	53	74
40 " " 45 "	12	7	19	11	19	30	49
45 " " 50 "	7	....	7	14	15	29	36
50 " " 55 "	4	....	4	9	10	19	23
55 " " 60 "	3	2	5	5	6	11	16
60 " " 65 "	1	1	2	....	1	1	3
65 " " 70 "	....	....	....	....	1	1	1
70 " " 75 "	....	....	....	....	2	2	2
	92	61	153	294	215	509	662

under the age of ten years, most if not all of them being inherited syphilis, and of these nearly one half were observed during the first six months of life. There were

none seen over sixty-five years of age in private practice; but among the poorer classes there were two patients over seventy years of age who presented syphilitic symptoms. Nearly one half the cases occurred between the ages of twenty and thirty.

In regard to sex the patients were quite evenly divided, 436 males to 363 females. It is impossible to determine with certainty if men are more subject to the disease than women. There are certain reasons which would operate to cause a fewer number of females to apply for treatment; prominent among these is shame, which often leads women to conceal even maladies which cause them great distress, when located on concealed portions of the body, or when supposed to be of venereal origin. The number of primary lesions presented for treatment in women is far less than those in men in every clinic with which I am acquainted; and it is surprising, sometimes, to find how serious a lesion exists, primary or secondary, which has long been concealed by a woman. It must also be borne in mind that the initial lesions are frequently deeply seated, and often actually escape the knowledge of females. In women who are bearing children there sometimes seems to be an immunity from the skin lesions of syphilis, perhaps for a long period; and frequently one will hear a married woman deny all skin lesions previous to a late tubercular or gummy manifestation. Among the children under five years of age there were nearly twice as many females as males.

IV. **Phthiriasis.**—The next skin affection which appears on the list, representing the diseased conditions of the skin caused by the presence of lice, can hardly be considered to occupy here its correct position, although the number of cases, 397, actually gave the next highest percentage, viz., 4.96. By reference to Table II it will be seen that the cases occurred principally among the lower classes, the proportion among private cases being less than half of one per cent. In a former analysis of the cases treated at Demilt Dispensary during 1876, phthiriasis composed twelve per cent. of the cases, standing second on the list in point of frequency. The number of cases could, of course, be greatly increased

if all the patients had been searched to discover the presence of lice. These cases refer to those who came for treatment on account of the itching and the lesions, which were found to be due to the presence of the parasite. Nearly two thirds of the patients were females, and in nearly two thirds of the cases the scalp was the portion infested; the long hair of girls and women, and the mode of dressing it, renders them peculiarly liable to this pest; pediculi were very rarely seen on the scalp of males. The single case of phthiriasis corporis seen in private practice was in the young daughter of a physician, who had just returned from a country boarding-place, and it could hardly be believed that the intense itching and the large masses of torn lesions could be due to so simple a cause; but the number of the pediculi present was very great.

Scabies, the other animal parasitic affection, which might properly be considered in this connection, will be seen to come fourteenth on the list, and will be mentioned in due order.

V. **Tineà**.—The vegetable parasitic eruptions constitute a large and important class of skin affections, coming fifth on the list, with a total of 360 cases, and forming four and one half per cent. of the whole. As will be seen in Table II, a number of quite different eruptions are included under the designation tinea, which are caused by three distinct parasites; these are, however, considered by some observers to be developments from one and the same fungus; we will consider, in turn, the lesions caused by them.

Tinea trichophytina, ringworm, or the eruption produced by the trichophyton tonsurans in different localities, is seen to constitute more than two thirds of the cases in this group; of these ringworm of the body formed nearly one half.

Tinea versicolor was observed 87 times, forming 1.08 per cent. of the whole; *tinea favosa*, or favus, occurred 31 times, making hardly .38 per cent., or less than one quarter the proportion occurring in Scotland.

The vegetable parasitic eruptions appeared in private and public practice in about the same proportion. In regard to

sexes, the number of males affected was almost double that of females.

VI. **Psoriasis.**—This eruption, which is generally believed to be very common, appears sixth on the list, with 333 cases, and a percentage of 4.16 of the entire number. The proportion in private practice was somewhat above that observed among the poor; this is probably owing to the greater attention paid to such eruptions by the upper classes, rather than to any greater frequency of the disease among them.

In regard to sex the cases were remarkably evenly divided, 169 males to 164 females. It is a little curious that in private practice the males should have been in excess by 23 cases, and in public practice the females in excess by 18 cases.

The following table exhibits the ages of most of the cases.

TABLE VII.

AGES OF PATIENTS WITH PSORIASIS.

Age.	Private Cases.			Public Cases.			Grand Totals.
	Males.	Females.	Total.	Males.	Females.	Total.	
Under 10 years	1	5	6	1	4	5	11
10 years to 20 years	3	13	16	15	24	39	55
20 " " 30 "	21	18	39	24	19	43	82
30 " " 40 "	28	10	38	15	16	31	69
40 " " 50 "	18	2	20	8	9	17	37
Over 50 years	6	6	12	6	11	17	29
	77	54	131	69	83	152	283

It is seen here that the eruption is rarely developed before ten years of age, in hardly 4 per cent. of all cases, and that it is comparatively seldom seen after fifty years of age. The youngest patients seen in private practice were two girls, not related to each other, each a little over five years of age; the eldest, a gentleman, aged seventy-two, with characteristic eruption on both elbows and some on the legs.

The largest number of cases was observed between the ages of twenty and thirty, although the number in the next

decade, thirty to forty, is large, considering the fewer persons living and the number of patients who neglect the treatment after a short trial. The age of greatest development is certainly after twenty, and the eruption seldom occurs for the first time after forty years of age.

It is to be understood that this table relates to the ages of patients at the time of applying for treatment, and not to the date of commencement of the eruption; in many instances the disease had lasted many years before coming under observation, and very rarely were cases seen within the first year of the appearance of the disease.

VII. **Urticaria.**—The true frequency of this eruption may not be indicated by its relative position as seventh in the list, and probably is not, for multitudes have more or less severe and transient attacks of urticaria without ever seeking medical relief of the same. The number of cases here occurring, namely, 199, or almost 2½ per cent., represents in the main the more severe and chronic cases, some of which had often lasted for months or years.

The number of females was almost double that of the males; this is probably owing to the greater delicacy of the female skin, and to their general tendency toward neurotic affections.

The following table exhibits the ages of the patients:

TABLE VIII.

AGES OF PATIENTS WITH URTICARIA.

Age.	Private Practice.			Public Practice.			Grand Totals.
	Males.	Females.	Total.	Males.	Females.	Total.	
10 years and under	1	2	3	18	16	34	37
10 " to 20 years	1	4	5	9	14	23	28
20 " " 30 "	4	7	11	5	21	26	37
30 " " 40 "	1	3	4	9	6	15	19
40 " " 50 "	2	10	12	6	2	8	20
50 " " 60 "	3	2	5	1	4	5	10
Over 60 years	2	2	4	1	1	2	6
	14	30	44	49	64	113	157

No conclusions can be drawn from this table; the eruption seems to be almost equally frequent at all ages; it often

appears in very young children, and not very infrequently occurs in connection with eczema, or in eczema patients during intervals of freedom from the latter eruption.

VIII. **Ulcus.**—Ulcers are, in most instances, very properly regarded as secondary lesions, the result of some preceding pathological condition, and should ordinarily be grouped or classed in connection with the disease to which they belong; thus, the primary lesion of syphilis, the chancre, and also later ulcerative lesions are in this analysis placed among the cases of syphilis. Ulcers occurring in connection with lupus, leprosy, sarcoma, epithelioma, etc., are, of course, included under those affections and excluded here.

The present group is made to contain but two varieties of ulcer: the simple ulcer, from injury or defective circulation, especially exemplified in varicose ulcers of the leg; and also the venereal ulcer, caused by the entrance of the chancroidal virus. Of the former there were 131 cases, or 1.63 per cent. of all cases; and of the latter, fifty cases, or .62 per cent. The ulcers of the lower leg were largely seen in women who were obliged to be much upon the feet, and were frequently associated with more or less eczema.

IX. **Dermatitis.**—Here are classed 172 cases, or 2.15 per cent. of the entire number, and among them lesions presenting very different characters, and occurring under varied conditions. If all eruptions exhibiting dermatitis, or inflammation of the derma, were placed here, the number would be many times as great as here recorded. But the term has in late years been used to represent a local, self-limited inflammation of the skin produced by causes outside of the body; here again, however, the local irritation produced by animal and vegetable parasites are excluded, having received separate names. The somewhat new name, dermatitis medicamentosa, refers to eruptions produced by the internal administration of certain drugs, as quinine, copaiba, iodide of potassium, etc., of which some very striking cases were observed, which cannot be detailed here.

The cases of dermatitis were evenly divided between the sexes, eighty-six males to eighty-six females, as shown in Table I: the ages of the patients are shown in the following table.

TABLE IX.

AGES OF PATIENTS WITH DERMATITIS.

Age.	Private Practice.			Public Practice.			Grand Totals.
	Males.	Females.	Total.	Males.	Females.	Total.	
6 months and under	....	....	....	....	1	1	1
6 " to 1 year	....	....	....	....	1	1	1
1 year to 2 years	....	....	....	1	4	5	5
2 years " 3 "	....	....	....	1	2	3	3
3 " " 4 "	....	....	....	....	2	2	2
4 " " 5 "	....	....	....	1	....	1	1
	....	....	....	3	10	13	13
5 years to 10 years	....	....	....	2	5	7	7
10 " " 15 "	1	1	2	1	7	8	10
15 " " 20 "	....	2	2	3	4	7	9
20 " " 25 "	....	2	3	4	1	5	8
25 " " 30 "	4	2	6	4	2	6	12
30 " " 35 "	4	1	5	4	6	10	15
35 " " 40 "	3	3	6	4	1	5	11
40 " " 45 "	4	1	5	....	3	3	8
45 " " 50 "	1	1	2	3	1	4	6
50 " " 55 "	2	....	2	1	2	3	5
55 " " 60 "	....	1	2	5	....	5	7
60 " " 65 "	1	....	1	1	....	1	2
65 " " 70 "	....	....	....	1	1	2	2
	20	14	36	36	43	79	115

It will be seen that the cases were distributed throughout all ages, the skin being at all periods liable to inflame from external causes. It is often very difficult to determine at the outset between some cases of simple or poisoned dermatitis and eczema, and often an eruption which begins as a purely local dermatitis from a well-defined cause, as a burn, an injury, or the effect of poison, may, in a proper subject, develop later into a typical eczema.

X. **Pruritus.**—It is very important to clearly separate pruritus as a disease from pruritus occurring in connection with other skin affections; in the 152 cases, forming 1.9 per cent., itching was the only symptom complained of, and the lesions present were those caused by scratching, care being taken to eliminate cases where the itching was caused by parasites. There were twenty-two cases of pruritus senilis, and twenty-three cases of pruritus hiemalis; in many of the other cases the itching was about the genital region.

There were seventy-eight males and seventy-four females treated for pruritus.

XI. **Furunculus.**—Boils were seen twice as often among the poor as among the richer classes; the total number in public and private practice was 151 cases, or 1.89 per cent., of which seventy-three were males to seventy-eight females. These numbers do not include every one who chanced to have boils while under treatment, but only those who applied for the relief of such; very many of the eczema patients presented boils at some time during treatment.

XII. **Lichen.**—One hundred and forty-eight cases of lichen were recorded, constituting 1.85 per cent.; of these, 117 were of lichen simplex. Many writers would class these latter cases, or most of them, as papular eczema, and fail to recognize the acute and chronic forms of this eruption, giving the name lichen only to the last three varieties mentioned in Table II. Clinically, however, these cases differ from papular eczema in many particulars, which cannot be dwelt on here, and there is but little doubt that the papular eruption, long called lichen, exists, which, though related to eczema, maintains a separate entity. There were twenty-four cases of lichen planus, some of which resembled closely the lichen ruber of Hebra.

The cases were quite evenly divided between the sexes, seventy-two males to seventy-six females.

XIII. **Erythema.**—Of the 128 cases of erythema, 1.6 per cent. of all, sixty-one or nearly one half were of the variety known as erythema multiforme, and but thirteen of erythema nodosum. The cases of multiform erythema presented the most varying forms and degrees of the eruption; bullæ were occasionally seen, even of some size, especially in several private patients. The females were almost double the number of the males, eighty-five to forty-three, pointing toward a neurotic element; in a number of instances the eruption was seen in young female immigrants, just landed, where the confinement of shipboard, with its unusual food and bad hygienic conditions, had greatly deranged the system, and induced extensive skin inflammation.

XIV. **Scabies.**—This eruption, which in the statistics from Glasgow public practice exactly equalled eczema in frequency, forming more than one quarter of all cases,

stands here fourteenth on the list, with but 128 cases, or 1.6 per cent. of the whole. In private practice there were but ten cases, forming .39 per cent., while in Anderson's private practice in Glasgow it formed 4.4 per cent. The eruption is certainly becoming less frequent in this country as a knowledge of its true nature prevails, and hygiene and cleanliness are inculcated; the proportion of cases in the last few years' practice is much less than the figures above given would indicate. Often weeks or even months will go by without a case presenting itself, then a group of cases in a family, or school, or district will appear; careful treatment will cure these, and no more cases will appear for some time.

Of the cases here recorded, seventy-five were in males and fifty-three in females; but a single female was seen in private practice with scabies.

XV. **Erysipelas.**—This disease formed a trifle over one per cent., there being ninety-one cases, thirty-four males and fifty-seven females. Most of these were of a very mild type, generally about the head and face, and were treated as out-patients; many of them were about the nose and cheeks, and were more properly of the character which I have described as pseudo-erysipelas, occurring in connection with catarrhal difficulty and nasal ulcerations, and were rather local inflammatory conditions of the lymphatics than true erysipelas.

XVI. **Alopecia.**—Loss of hair is naturally a condition exciting more solicitude among the patients in private practice than among those in the lower walks of life, consequently we find more than three quarters of the cases belonging to the former class, namely, sixty-nine cases, forming 2.67 per cent. of all those seen in private practice. The total number of cases of alopecia seen was eighty-nine, forming 1.11 per cent. of the whole; of these the males were almost double the number of females, namely, fifty-nine to thirty.

Alopecia areata formed more than one half of all the cases, namely, forty-six; of these, fourteen occurred in public practice, and thirty-two in private practice, with a per centage of 1.24 of all private cases. The difference be-

tween the relative frequency of the disease in private practice with its percentage of 1.24, and in public practice with its percentage of .25, is not a little remarkable. The appearance presented by the smooth bald patches is so striking that it cannot escape attention, and the poor who are affected appear almost as solicitous about it as do the rich. The fact of its occurring, according to these statistics, almost five times as frequently among those in the higher classes as among those in the lower walks of life, points strongly toward the neurotic origin of the disease, and equally strongly away from its supposed parasitic origin. The following table exhibits the age and sex of patients with alopecia areata seen in private practice.

TABLE X.

AGES OF PATIENTS WITH ALOPECIA AREATA IN PRIVATE PRACTICE.

Age.	Males.	Females.	Total.
10 years of age and under	...	3	3
10 years to 20 years of age	2	1	3
20 " " 30 " "	8	3	11
30 " " 40 " "	12	2	14
40 " " 50 " "	1	...	1
50 " " 60 " "	3	...	3
	26	9	35

From this it is seen that this peculiar affection is rarely seen in young life, only one sixth of the cases being twenty or less years of age; nor is it often seen after the age of forty. The youngest cases were in girls, aged respectively six, eight, and ten years; the oldest, a gentleman fifty-four years of age. The males were almost three times the number of the females.

XVII. **Zoster.**—Eighty-eight cases of herpes zoster were observed, giving a proportion of only a trifle over 1 per cent. This shows the disease to be less common than is usually supposed; the eruption is so startling, and often so painful, that those affected generally apply for relief, so that this percentage may be taken as a fair indication of its general frequency.

The accompanying table exhibits the ages of the cases.

TABLE XI.

AGES OF PATIENTS WITH ZOSTER.

Age.	Private.			Dispensary.			Grand Totals.
	Males.	Females.	Total.	Males.	Females.	Total.	
10 years and under	...	2	2	4	4	8	10
10 years to 15 years	...	1	1	4	5	9	10
15 " " 20 "	...	2	2	1	2	3	5
20 " " 25 "	...	...	...	2	1	3	3
25 " " 30 "	2	2	4	1	1	2	6
30 " " 35 "	5	...	5	3	2	5	10
35 " " 40 "	1	1	2	1	1	2	4
40 " " 45 "	2	1	3	2	...	2	5
45 " " 50 "	2	...	2	...	2	2	4
50 " " 55 "	...	...	...	...	1	1	1
55 " " 60 "	1	...	1	2	1	3	4
60 " " 65 "	...	1	1	...	...	...	1
65 " " 70 "	1	1	2	...	2	2	4
81 years	...	1	1	...	...	...	1
	14	12	26	20	22	42	68

It will be seen by this that the disease is met with at all ages; although it has always been thought to be very uncommon in young children, ten cases were seen in those ten years or less of age. The youngest patients in private practice were: a little girl of five years with a thoracic zona at the level of the seventh dorsal vertebra, possibly caused by irritation from vertebral caries very marked in that region; the other young patient was a girl of ten years, with a left lumbar zona, extending around into the groin. The oldest patient was a lady of eighty-one years, with an eruption on the left side of the neck, extending into the hair; the neuralgic pain of this was very great, but was completely relieved by a few applications from a galvanic battery.

In regard to sex the patients were exactly divided, an equal number of males and females.

XVIII. **Epithelioma.**—Next, in point of general frequency, comes epithelioma, with eighty-six cases and 1.08 per cent.; this, like several other diseases, occurred much more frequently in private than in public practice, it forming 1.74 per cent. of the former, and but .76 per cent. of the

latter. This apparent difference is probably owing to the greater anxiety with which those in the higher walks of life regard any thing which may in any way suggest a cancerous growth, rather than to any real predominance of the disease among the higher classes. Most of the cases presented the lesion upon the face, especially in the region of the nose; epithelioma of the lip was seldom seen, most of these cases going at once to the surgeon. There were fifty males and thirty-six females with epithelioma.

The ages of the private patients are exhibited in the following table.

TABLE XII.

AGES OF PATIENTS WITH EPITHELIOMA IN PRIVATE PRACTICE.

Age.	Males.	Females.	Total.
Under 20 years of age	...	1	1
30 years to 40 years of age	4	3	7
40 " " 50 " "	7	6	13
50 " " 60 " "	9	3	12
60 " " 70 " "	9	6	15
70 " " 80 " "	3	2	5
	32	21	53

As is known, the disease is rare in young life, but eight cases appearing in patients less than forty years of age; there was only one patient under thirty years of age, that being a colored woman nineteen years old, with epithelioma of the vulva.

XIX. **Herpes.**—The eruptions known as herpes (with the exception of herpes zoster, already considered) came next in frequency, with seventy cases, forming .87 per cent.; there were, forty males and thirty females with herpes. In twenty cases the genital region was affected, nineteen males and one female; the eruption is probably much more frequent in females than this would indicate, but shame very frequently prevents attention being given to such an eruption, which generally passes away quickly, without treatment.

XX. **Lupus.**—This disease is comparatively rare in this country, there being but sixty-nine cases among those ana-

lyzed, giving a percentage of only .86 in the whole number of cases. The cases were more common in private practice, where they formed 1.24 per cent. In other countries the disease is much more frequent; thus, in Glasgow, lupus formed 1.98 per cent. of McCall Anderson's public cases, and 2.5 per cent. in his private practice.

Of our sixty-nine cases, forty-two were of lupus erythematosus, and twenty-seven of lupus vulgaris: it is understood that tubercular syphilis, often known as syphilitic lupus, is excluded here, and reckoned among syphilitic cases.

Lupus is decidedly a disease belonging to the female sex; of these cases there were eighteen observed in males and fifty-one in females.

XXII. **Chloasma**.—This is another affection which is much more commonly seen in private than in public practice: of the forty-two cases, thirty-two occurred in private practice, forming 1.24 per cent. of all the cases. It is also almost wholly an eruption belonging to females: of the forty-two cases, but two were seen in males, both cases being in private practice, and well marked.

XXIII. **Purpura**.—There is little of interest in regard to the cases of purpura, except that from its relative position in this list the disease would appear to be much less frequent than might be commonly supposed, as it only formed .49 per cent. of all cases. It was seen with about equal frequency in private and public practice, and about as often in females as in males.

XXVI. **Ichthyosis**.—This affection was also observed much less frequently than might be expected, there being but twenty-eight cases, with a percentage of .35, of which the larger number were seen in private practice; it was seen seventeen times in males and eleven times in females.

XXVIII. **Sycosis**.—The cases here referred to relate to true, non-parasitic sycosis, a folliculitis or inflammatory condition in and around the hair follicles, principally occurring on the bearded face. This is quite distinct on the one hand from pustular eczema of the beard, and on the other from the vegetable parasitic eruption occurring in the beard, sometimes known as parasitic sycosis, or barber's itch; this

latter appears under its proper head, tinea trichophytina, which was spoken of fifth on the list.

There were twenty-seven cases of sycosis, all in males, forming .34 per cent. of the entire number of cases.

XXX. **Nævus.**—The actual frequency of nævus is not at all indicated by its position in this list, for comparatively few of those affected with any of the forms of "birth marks" ever seek medical or surgical relief; the popular superstition against the removal of these deformities is still very strong, as constantly appears when it is suggested to treat one which is casually found on a patient applying for some other difficulty. The cases which are brought for treatment are generally in children where the deformity is especially marked, or where a protruding or rapidly extending nævus, especially on the face or scalp, causes more than ordinary anxiety.

There were but twenty-six cases of nævus recorded, seven in males, and nineteen in females; of the whole number, sixteen were in private practice, giving .62 per cent., against .18 per cent. among the public cases.

XXXII. **Varicella.**—Chicken-pox is not very infrequently brought for treatment, under the supposition that it is some purely skin affection, and in slightly marked and also in very severe cases the diagnosis is often a little difficult. Twenty-one cases thus appeared, which, of course, in no way indicates the relative frequency of the disease, as the family physician is usually seen at once for such an eruption; the same is true of other exanthemata, and measles, scarlatina, and small-pox occur seldom in such statistics as those here presented.

XXXIII. **Leucoderma.**—This was mainly observed in private practice, where occurred seventeen out of the total twenty cases: those who are apt to resort to public clinics seldom pay attention to such pigmentary conditions, but from the comparative infrequency with which I have chanced to meet with it among those in the lower walks of life, both among patients and others, I am inclined to believe that it occurs much less frequently among them than among those who are more subject to nervous strain in the classes of society.

Of the twenty cases, eleven were in male and nine in female subjects. One very striking case was in a dark negro girl, in whom the process of whitening was occurring, the patches extending with considerable rapidity. They were scattered over various parts of the body, head, and limbs; and the shoulders, chest, and neck, which were large and finely formed, had every appearance of belonging to a white girl of fair skin.

XXXIV. **Ecthyma** and **Impetigo.**—Among the poor it is not very uncommon to find large pustular lesions, not belonging to other conditions, as, for instance, not due to scabies or syphilis, and not induced by pediculi or other recognizable cause: to these the names impetigo and ecthyma are given, although some recent authors, as Hebra, do not recognize these as independent affections. There were eighteen cases of ecthyma recorded, and thirteen of impetigo; the difference in the eruptions being mainly one of degree—the latter being more superficial pustules, the former more boil-like, but not having the central core.

Of the thirty-one cases, fifteen were in males and sixteen in females.

XXXVII. **Pemphigus** and **Hydroa.**—Excluding syphilitic forms of this eruption, seen mainly in children, and also excluding the cases of multiform erythema in which sometimes quite large bullæ appear, true pemphigus is a rare affection in this country. But seventeen cases were recorded as pemphigus, and it is quite possible that some of these cases on further study might prove to be more properly classed as multiform erythema or other affections.

The term hydroa has been employed to designate irregular cases in which the bullæ are smaller than those commonly recognized as belonging to pemphigus, and which do not exhibit the features which could place them elsewhere. There were nine cases thus recorded. Of the total twenty-six cases thus exhibiting bullæ, twelve were in males and fourteen in females.

XLI. **Keloid.**—This curious neoplasm was recorded in but eleven cases, seven males and four females, but may be much more frequent than thus indicated, as casual cases

are occasionally met with, for which medical advice is never sought.

XLII. **Xanthoma.**—But ten cases of this condition were recorded, although the disease is relatively far more frequent than is indicated by this number, which makes only .12 per cent. of the whole: the milder forms occurring on the eyelids were occasionally noticed on patients with other affections, but not recorded in the notes. Of the ten cases, three were in males and seven in females.

XLV. **Morphœa** and **Scleroderma.**—These affections, which are closely allied, are rarely met with, they together forming only .15 per cent. of the whole number of cases. There were eight cases of morphœa, two males and six females; and four of scleroderma, one male and three females: this relation of the numbers in the sexes corresponds to that mentioned by other observers, who state both the diseases to be much more frequent in women than men.

L. **Lepra.**—Six cases of true leprosy, elephantiasis Græcorum, were recorded, four occurring in private practice and two among public cases; these were all in males. A number of other cases were seen at different times in hospitals and elsewhere, which were not recorded, as not belonging to the cases here analyzed. In two cases in private practice the patients were native-born Americans, and without discoverable heredity of the disease, and had never been five hundred miles from New York City. The origin in many cases was traced to residence in countries affected with the disease.

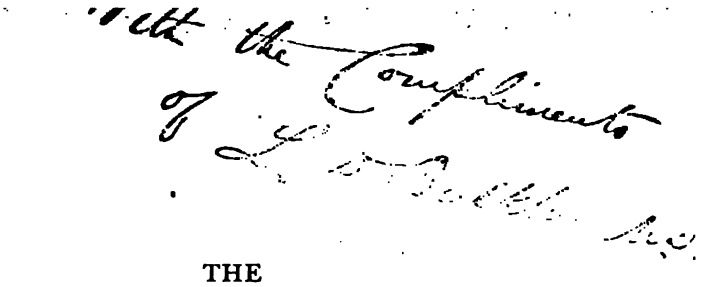
LX. **Trichorexis nodosa.**—Four instances of this peculiar condition were noted, all in males, in private practice; two were in physicians who also studied their cases very carefully. In all the patients the disease proved very rebellious.

LXXXVIII. **Prurigo.**—This eruption was recorded in but a single instance, and that in private practice, in a young lady, aged twenty-three years. The case was a very distressing one, and the patient finally died of glandular enlargements, which occurred in many parts of the body. No autopsy was obtained, but there was evidence during life of malignant disease of the lymphatic glands within the chest, which was the apparent cause of death.

LXXXIX. **Rhinoscleroma.**—A single case was recorded as rhinoscleroma, in the person of a young lady, twenty-seven years of age. The clinical features, the age of the patient, and the behavior of the disease after cauterization and cutting operations, all pointed strongly to the affection described by Hebra as rhinoscleroma, but after excision the growth resembled epithelioma microscopically in many of its elements.

In presenting the foregoing tables of statistics and the comments thereon, I have endeavored to add, in some measure, to the knowledge of the natural history of the various affections to which the skin is subject. The practical advantages to be derived from such presentations of facts are not always apparent at first sight, but it cannot be denied that every thing which contributes to knowledge will, in the end, in some way or other, be of service. The subject of diseases of the skin has been an obscure one in years which are past, and it is only within the memory of those now practicing medicine that much light has shined out of the darkness. Facts have rapidly accumulated in recent years, and much which was uncertain in dermatology is now well determined. It is hoped that the accompanying tables, which have cost much time and labor, will assist in determining the relative frequency of diseases of the skin, and their relations to age and sex.

The cases upon which the tables are based have been seen during the past twelve years, and the notes which have been taken of them to assist in their management, have not only served their purpose in that manner, but have afforded material for study, from which much knowledge can yet be drawn. The habit of careful note-taking cannot be too earnestly urged, especially among the younger members of the profession, who have the leisure in which to acquire the habit; not only do case records serve as aids to successful practice, but they are invaluable for the purpose of affording data from which alone disease can be studied in a scientific and satisfactory manner.



THE

RELATIONS OF THE URINE

TO

DISEASES OF THE SKIN

"We want a critical investigation of skin diseases in their relation with diseases of other organs. Are diseases of the kidney or of the liver frequently productive of them? and if so, what are the peculiarities of such. Which are in special relation with the nervous system? Are diseases of the intestinal or pulmonary mucous membranes frequently associated with those of the skin? * * * * We earnestly beg of our specialists in this department that they will abandon all useless controversy as to nomenclature, orthography, and classification, and betake themselves to the earnest study of the causes of the maladies which come under their care."—*British Medical Journal, Jan.* 22, 1870.

FEW fields of scientific research in practical medicine present greater attractions, and yet at first sight greater difficulties, than that of chemical physiology and pathology, and but few lines of investigation and applied science have been more neglected by the profession, both in the teachings of the schools and in practice at the bedside. That this is unnecessary, and that exact chemical science can be applied to the study and treatment of disease, the names of Prout, Bird, Bence Jones, Thudicum, Garrod, Murchison and others, in the English school alone, well testify.

The aim of the present paper is to contribute somewhat to this branch of study as far as relates to the changes observed in the urine in diseases of the skin, and to endeavor to draw therefrom some practical considerations and therapeutical suggestions.

As is well known, many of the diseases of the skin are sup-

* Read before the New York Academy of Medicine, April 15, 1875.

posed to be entirely local in their origin, as the parasitic affections, lupus, epithelioma, etc.; others, again, to be purely nervous, as herpes zoster, and perhaps others; still others to be due to dyscrasiæ, as syphilis and leprosy. How far all these are dependent upon deranged blood-states such as appear to be measurably demonstrated in other affections, it is at present impossible to determine, but it is highly probable that such derangements not only favor the inception and development of all skin diseases, but, during their continuance, greatly retard their cure and aggravate their symptoms. While therefore my studies and my remarks apply more particularly to such diseases as eczema, acne, psoriasis, urticaria, and the like, I consider that the condition of the urine is one well worthy of investigation in reference to all maladies affecting the integument, for we can never know how much a systemic disorder has to do with the local manifestations of the syphilitic or other poison, or in preparing the way even for parasitic diseases.

It will be understood, of course, when I speak of the changes in the urine I take them only as indications of the blood state and of assimilation and nutrition as influenced in various ways, the urine being the secretion of all others which indicates most quickly and surely a disordered blood-current. The presence of sugar in the urine after a hearty meal of sugar or starch, the appearance of albumen after certain other ingesta, as also the quick and ready recognition of iodide of potassium and other drugs in the urine, all point to it as a valuable sign of the condition of the all-nourishing blood. The further fact of the urine being discharged, as a rule, very soon after its secretion, added to the ease of its collection and examination, renders it a valuable aid to the physician in studying disease.

I am well aware that the constitutional origin and nature of skin diseases of the kind to which more especial attention is directed, in the present paper, is not a new matter; it has, indeed, occupied very largely the attention of many for a long time. To the French school chiefly do we owe the literature relating to the arthritic diathesis, and to their writers would I give full credit for the persistency with which they have adhered to and promulgated their views on the subject, although continually slighted or ridiculed by others having ample opportunities of observation and practice. In the present paper, while vindicating in a measure, the diathetic origin of many skin diseases, I would not be understood by any means as supporting *in toto* the arthritic, herpetic or dartrous diatheses, which, I think, certain dermatologists, notably the French, have insisted upon further even than many of their own scholars are willing to accept and follow; I desire however, to direct very serious attention to the existence of a morbid blood state as a predisposing cause of many of the ailments affecting the skin, my studies and analyses convincing me that assimilative errors, as indicated very frequently and largely by the state of the urine, are at the base of a considerable share of cutaneous affections.

I cannot better enter on my subject than by recalling certain experiments of Gigot-Suard,* illustrative of the effect to the circulation in the blood of some of the excrementitious elements from the urine, although I can hardly accede to the verity of some of his deductions.

He administered 2.3 grains of uric acid to a medium sized dog, morning and evening, for two months: great itching ensued in about eight days, also scaliness. Its two pups exhibited eczema, the mother also showed some vesicles. Another dog, of three years, medium size, took 3 grains of uric acid daily for two months, with the effect of calling out a pruriginous eruption of papules and vesicles which remained after the administration of the acid was stopped, and six months later the animal presented, as Gigot-Suard says, a veritable psoriasis, in the scales of which he found on chemical and microscopic examination very numerous crystals of urate of soda and some of oxalate of lime. He likewise gave uric acid internally to some patients, with similar results, which I will not here detail. He further administered 4.5 grains of oxalic acid daily for a month to certain patients, with the effect of provoking rheumatic pains, severe pruritus, and, in one case, erythema and urticaria. Hippuric acid, in doses of 4.6 grains morning and night, caused itching, with the subsequent development of papules, an erythematous redness and many groups of vesicles resembling zona, about the waist of a woman aged 45, who had never had any cutaneous affection previously. Urea, given to the amount of 7.7 grains daily for 15 days to a boy 11 years old, produced coryza and a vesicular eruption at the external nares and on the lips. A man, aged 30, after taking 154 grains of urea, in ten days, had a coryza, then an angina and bronchitis, and a slight erythematous condition about the nostrils. He had also intercostal pains and a pruritus of various parts of the body, but no eruption.

Now we know well of the presence of uric acid in the blood in gout, as Garrod† has demonstrated, and that uric acid may be found in the fluid contained in blisters produced on gouty subjects. Gigot-Suard‡ discovered it also in the contents of the vesicles of a case of eczema of the hands in a man 45 years of age, who had, however, gouty pains and deposits as well. The same observer likewise found urate of soda, uric acid, phosphate of soda and phosphate of lime crystallized from the fluid of some pemphigoid bullæ occurring in a patient with psoriasis. He further analyzed the scales from a patient who had had psoriasis 15 years, and who never had rheumatism, and found uric acid in one experiment, in another he developed the murexide, and in the third, crystals of urate of soda and some of urate of ammonia. He states that he has repeated these researches, and has frequently found uric acid in the pathological products of the skin. Dr. Beale§ examined the

* L'Herpètisme; pathogénie, manifestations, etc. Paris, 1870—pp. 21–38. and pp. 447–459

† Reynolds' system of of Medicine, Vol. I, p. 825.

‡ L' Herpétisme, etc. Paris 1870, p. 15.

§ Archives of Medicine Vol. I, p. 316.

scales from two psoriatic patients and found sulphate and phosphate of lime, but did not appear to have searched for urea or uric acid.

Again, urea exists to a very small degree as a constituent of the normal perspiration, and may be increased very largely in certain pathological conditions, and when there is deficient elimination by the kidneys.* Garrod † mentions the case of a patient suffering from a very decided attack of gout, who went into a Turkish bath and made preparations which enabled him to save a considerable amount of perspiration. This, on proper analysis, yielded a notable amount or urea but no uric acid. A remarkable case has recently been given by Dr. Taylor ‡ where urea was largely secreted by the skin. The patient died with symptoms of uræmic intoxication, following granular degeneration of the kidneys. Two days before death her face appeared as if sprinkled with flour, and the deposit, which was moderately adherent to the skin, was found to be composed of urea; somewhat the same appeared on the hands. Other similar cases have been recorded.

The relations of the kidney secretion to the skin may be further illustrated by the experiments which have been made as to the urinary changes occurring under the use of baths. I will mention but a few of the more recent investigations. Kirejeff § submitted two healthy soldiers to the action of daily baths, at a fixed time, and concludes, that while the total daily quantity and the reaction of the urine is unaltered thereby, its specific gravity and *daily quantity of solids* are increased. Urea and uric acid are both excreted in large quantity, the ash of the urine in one instance exceeded the normal by one-half. Much the same results were obtained from the daily use of cold sitz-baths, and he believes that exchange of material and metamorphosis of tissue are promoted by both cold and warm sitz-baths. Dr. Clemens ‖ found that, during the first 15 minutes of a bath, the quantity of urine, as compared to that of the preceding 15 minutes, was doubled, chloride of sodium and urea were slightly increased and the phosphates and other non-volatile saline matters were quadrupled. This effect gradually diminished during the next 30 minutes, but on the addition of a decoction of spruce it was renewed in a higher degree than before, especially as to the phosphates, the excess of which was now nearly 5 times that before the bath. The addition of saline solutions to the bath, instead of the decoction of spruce, gave the same results. Clemens also found that all baths diminish the specific gravity of the urine passed during or just after the bath, and that the urine passed for several hours after is rich in phosphates and poor in uric acid and water.¶

* Flint's Physiology, Vol. III. p. 142. † Reynolds, Vol. I. p. 825.

‡ Guy's Hosp. Rep., Vol. XIX, 1874. Am. Jour. Med. Sci. Jan., 1875, p. 209.

§ Virchow, Vol. XXII. p. 496. Syd. Soc. Year Book, 1862, p. 422.

‖ Med. Centr. Ztg. Vol. XXX., Nos. 53 & 59. Syd. Year Book, 1862, p. 424.

¶ Froriep's Notiz. 1860, Vol. II., No. 2. Syd. Year Book, 1861, p. 102.

Muller* as the result of experiments on animals, determined that ice-cold packing and ice-cold showers increased very notably the *rate* of urinary secretion, while similar use of *hot* water markedly diminished the rate of secretion of the urine, the greatest increase being from 30 drops per minute to 41, and the greatest diminution from 26 to 5 drops per minute. The wonderfully intimate relations between these two great secreting organs is thus shown, the relief to the kidneys by free action of the skin being here exhibited to its fullest extent. The same is shown where the skin takes on unnaturally free action as in a curious case of general sweating recorded by Dr. Gibb.† A man, aged 25 years, had had profuse and very general hyperidrosis for 4 years. The urine was of a full amber color, clear on passing, and feebly acid, with a specific gravity of 1.028. In a few hours it turned opaque and muddy from a considerable deposit of pink urate of soda, readily dissolved by heat. The usual salts were present, also a large amount of chlorides. There was no albumen, no sugar, no hippuric acid. Oxalate of lime and cystine were found microscopically.

In this same line of thought and argument, I may allude to the effects of arresting completely the perspiration, and its effect upon the kidneys. Socoloff found albumen in the urine of animals very soon after varnishing the skin, and in every case in which the experiment was tried a parenchymatous inflammation of the kidneys resulted. Lang found, an hour or two after death by varnishing the surface, crystals of triple phosphate in various parts of the body which he regarded as resulting from the decomposition of the urea; he thought the deaths resulted from uræmia.‡

Remembering, then, the physiological connections of the skin and kidneys, and bearing also in mind the pathological relations constantly exhibited in daily practice, such as the dry harsh skin in chronic kidney disease, and conversely the occasional occurrence of kidney congestion and urinary derangement from a chilling of the cutaneous surface, and considering further what has been premised as to the effect of retained and circulating excreta, as urea, uric acid, etc., we might well expect in diseases of the integument to find some alterations in the secretion of the kidneys.

The urinary changes in diseases of the skin have been but little studied hitherto, and the observations bearing on the point are few and scattered, most of the standard works on cutaneous medicine ignoring the matter almost entirely. My experience, however, though limited as yet, has taught me the very close and important relations existing between the kidney secretion, on the one hand, and the state of the skin on the other, and that much may be learned of the latter by a careful attention to the former, and much done to relieve the skin by rectifying the disorders found in the urine.

* Archiv für Exper. Pathol.; Phil. Med. Times, 1874; Am. Jour. Syph. & Derm., July, 1874.

† Beale's Archives of Medicine, Vol. II., p. 280.

‡ Am. Jour. Med. Sciences, April, 1873, p. 527.

My recorded urinary examinations date back to January, 1867, since which time I have notes of 605 examinations, all made by myself, except those during the past year and a half, which were observed and recorded by my assistants, Dr. Lewis and Dr. Robert Campbell, under my immediate supervision. These 605 examinations relate to 191 patients, but, as many of the earlier ones were from the practice of the late Dr. H. D. Bulkley, only about one half pertain to patients affected with diseases of the skin, and these latter alone I shall speak of and analyze on the present occasion. My personal observations, therefore, in the relations of urinary derangements to diseases of the skin are based on 323 recorded examinations, relating to 109 patients, further verified by numerous recorded statements of patients and also of physicians with whom I have been in consultation, as to former disorders of this kind, and confirmed also by clinical observations on the action of remedies and measures calculated to affect the kidney secretion.

These examinations, which have been confined almost exclusively to patients in private practice, and made solely in the ordinary run of business to assist in treatment, relate to 46 patients with eczema, mostly chronic, 22 patients with acne, 14 with psoriasis, 6 with pruritus, 5 with erythema, and 16 with miscellaneous cutaneous affections.

For completeness I shall first make brief mention of the observations of others as to the urinary changes observed during the febrile affections of the skin, although I would by no means attach the same importance to the state of the urine in those that I do in the chronic diseases of the skin. I am well aware that the question arises, whether these alterations are not altogether independent of the cutaneous lesion and due solely to the febrile state, for we know that the urine is disordered in other fevers where the skin is not at all affected. The question cannot yet be answered, for our knowledge of the pathology of fever is far too small to assert that the blood derangement and consequent urinary alterations are certainly secondary and have nothing to do with the skin lesions, nor do we know how many of the phenomena of all febrile diseases are due to deficient cutaneous action. The same urinary changes occur also in states where there is no fever whatever, as in lithæmia from indigestion, and in functional derangements of the liver, as also in certain "structural diseases of the liver, and particularly in those which are characterized by an increased amount of blood in the organ, such as inflammation, cirrhosis, cancer and simple hyperæmia, whether mechanical or active."* If, however, further research should establish certain differences between the urines passed during the different exanthemata the presumption would be strong in favor of a relation between the state of the kidney secretion and that of

*Murchison, on Functional Derangements of the Liver.—New York, 1875, p. 65.

the skin; the number of recorded observations is as yet too few to prove this, but in the light of the above arguments I feel warranted in including, in our present consideration, the changes of the urine occuring during the febrile diseases of the skin.

I. **Erysipelas.**—Schönlein * states that in Erysipelas the urine is frequently loaded with bile pigment, and is of a reddish brown or red color. At the urinary crisis fawn-colored precipitates occur, and the urine becomes clear. Becquerel † made two quantitative analyses of the urine of a man, 39 years of age, with erysipelas of the face. The first specimen passed on the fourth day was of a deep yellowish-red color, and clear, specific gravity, 1.021. The second specimen from the 6th day, appeared almost black, threw down a reddish sediment of uric acid, and had a specific gravity of 1.023. The analyses are as follows, Becquerel's analysis of healthy urine being placed for comparison in a third column :—

	ANAL. I.	ANAL. II.	HEALTH. ‡
Ounces of urine in 24 hours	27.0	30.8	45.0
Specific gravity	1.021	1.023	1.017
Water	965.5	961.9	972.0
Solid constituents	34.5	38.1	28.0
Urea	12.5	12.7	12.1
Uric acid	1.2	1.3	0.4
Fixed salts		8.2	6.9
Extractive matter		15.9	8.6

In a woman, aged 45, with erysipelas of the head, Simon found the urine very scanty, of a dark brown color, strongly acid, specific gravity 1.023. and depositing a yellow sediment. It contained

Water	961.7
Solid constituents	38.3
Urea	11.7
Uric acid	1.3
Fixed salts	9.2
Extractive matter	15.7

Reynolds § states that albumen appears in the urine in many cases; it may make its appearance from the 4th to the 8th day, or even later in relapse; also that the quantity of urea is increased, while that of the chlorides is diminished. Parkes ‖ says that the excretion of chloride of sodium by the urine in erysipelas is so far diminished, that even when taken in 2 drachm doses it does not pass off by the urine in two days, showing most decided retention.

In the only case of erysipelas in which I have examined the

* Simon's Animal Chemistry, Syd. Transl., Vol. II., p. 278. † Ib.

‡ This differs somewhat from that given by Flint (Physiology, Vol. III., p. 123), but is here quoted in full because those in disease are by the same writer.

§ A System of Medicine, Vol. I., p. 684.

‖ The composition of the urine, London, 1860.

urine, I found the specific gravity of the morning and night specimens to be both 1.020, the reaction acid, the color of a reddish yellow, and absolutely nothing microscopically, even after standing 24 and 36 hours.

II. **Measles.**—During the eruptive period, the urine is dark red, rich in uric acid and urates,* followed by abundant diuresis when this stage is passed.† Albumen is extremely common in some epidemics, and appears simultaneously with the eruption: blood in small quantities is also common. In the Leith epidemic of 1854, the recoveries were most speedy when the albuminuria was the greatest.‡

III. **Scarlet Fever.**—Dr. Gee, § after careful study, states of the urine in this disease, that: 1. The water is diminished in quantity; 2, the quantity of urea excreted is not necessarily increased during the pyrexia; 3, chloride of sodium is more or less diminished, sometimes very greatly, sometimes very little; 4, phosphoric acid is diminished for several days after the first five days of the eruption; 5, uric acid, in one case, was almost entirely suppressed on the second and third days, normal on the fourth, in great excess on the fifth and last day of the pyrexia, and normal thereafter. Sediments of uric acid and urates he states to be common. Simon ‖ examined the urine of a boy, aged 5 years, at the acme of septic scarlatina. The urine was of a dark yellow color, had an alkaline reaction, a very disagreeable ammoniacal odor, and deposited earthy phosphates and urates of ammonia and soda. The specific gravity was 1.022, and about 16 ounces were discharged in 24 hours. There were contained in 1000 parts—

Water	943.60
Solid constituents	56.40
Urea	19.35
Uric acid	1.69

The urine was afterwards examined again and possessed similar characters; the sediment being more copious.

The occurrence of albuminaria in scarlet fever, and the attendant kidney changes are familiar to all, and need not occupy us here, except in a general way, as indicating the connection between the kidneys and the skin, for it is during the desquamative stage, when the skin as a secreting organ is especially damaged that this serious complication generally appears.

IV. **Small pox.**—In the beginning of this disease, according to Simon, ¶ the urine is decreased in quantity and increased in specific gravity; its color is deep and red, it is frequently turbid and often contains a small amount of albumen. In the eruptive

* Vogel, Diseases of Children, 2d. Edit., New York, 1871, p. 486.
† Steiner, Diseases of Children, New York, 1875, p. 346.
‡ Aitken, Science & Practice of Med., Phila., 1866, Vol. I., p. 297.
§ Reynolds' System of Medicine, Vol. I., p. 339.
‖ Animal Chemistry, Syd. Transl., Vol. II., p. 269 ¶ Ib. p. 282.

stage, as ascertained by Becquerel, in five cases in which the symptoms were severe, the urinary secretion was diminished and amounted on the average to only 23.5 ounces in 24 hours. The specific gravity had not, however, increased as much as might have been expected, being only 1.020,6. It frequently threw down uric acid precipitates, either spontaneously or on the addition of nitric acid, and in one case albumen was observed. Curschman * states that the chlorides are usually diminished, sometimes to a minimum.

We may now pass to some of the diseases more commonly reckoned as affections of the skin, and will take first those nearly allied to the exanthemata, namely urticaria and erythema.

V. **Urticaria.**—Dr. Graves † was one of the first to mention the occurrence of urticaria supervening upon an acute jaundice in rheumatic subjects, and established very clearly the connection between those states. And I may here, for the present purpose, consider the jaundice itself as a skin disease quite as much as the urticaria, for with the discoloration of the skin we have often an intolerable itching, lasting generally till the cause is removed. Now the gross characters of icteric urine are familiar to all; an analysis of it is given by Simon, ‡ who found the urea much below the normal average, and the uric acid much increased, the fixed salts also diminished, except the phosphates, which were also increased. He also gives an analysis by Scherer of the urine in urticaria tuberculosa, the patient being a young man who likewise suffered from rheumatism. The urine was discharged in very small quantity, often not more than five or six ounces in 48 hours. It was clear, of a brownish red color, very acid and with a specific gravity of 1.028. The urea appears to be in great excess and the uric acid somewhat more abundant than in health. The difference between this and the preceding and following analyses is perhaps explained by the great concentration of the urine, or possibly by the co-existence of disturbing elements. In a case of urticaria where the urine was analyzed by Dr. Maclagan of Edinburgh, § its composition was found to be as follows, in one thousand parts:

Water and organic matter	981.01
Urea	6.91
Uric acid	0.05
Inorganic matter	12 03

The urine was distinctly acid, specific gravity 1.010, of a pale straw color and clear, with no deposit.

The chief peculiarity was a deficiency in the ordinary characteristic ingredients of the urine, the urea and uric acid. This could not arise from mere excess of water, first, because the urine was not excessive in quantity; second, because the inorganic salts were above the normal standard, whereas had the water been in excess

* Ziemssen, Cyclopædia of the Practice of Med., Vol. II., p. 348.
† Clinical Lectures, Second Amer. Edit., Phil., 1842, p. 122.
‡ Animal Chemistry, Syd. Transl., Vol. II., p. 314.
§ London Lancet (Amer. reprint), Oct. 1846, p. 366.

they ought to have indicated a diluted condition of the urine. Dr. Maclagan ventured, therefore, to propose as a pathological view of the case that the defect was merely a deficiency in urea and uric acid, in short, a want of what modern chemists call the products of the transformation of the tissues, and that the retention thus in the system of matters which ought to be eliminated, might be the cause of the cutaneous irritation, especially, occurring as it did after meals. The patient was given colchicum, and the specific gravity of the urine was found to have risen to 1.029, and the urea to have decidedly increased in quantity, an analysis yielding:

Water and organic matter ...	966.42
Urea	20.36
Uric acid	0.50
Inorganic salts	12.72

The urea was thus tripled in amount and raised above its normal standard, and the uric acid augmented ten-fold; the urticaria improved and finally disappeared under the use of the colchicum.

His conclusions were, 1. That urticaria is intimately connected with a deficiency of the organic salts of the urine, and their probable retention in the system; 2. That colchicum has an action capable of restoring the deficient salts and thus curing the disease; 3. Rheumatism and urticaria, and purpura and urticaria are frequently found together.

Dr. Murchison* mentions the case of a boy, aged 9, with urticaria tuberosa and purpura urticans complicated with hemorrhages from the bowels, kidneys and urinary passage, and with the discharge of much lithic acid in the urine. Dr. Tilbury Fox† recognizes deficient urinary secretion as a cause of urticaria. Dr. Wilson Fox‡ alludes to urticaria and herpes as complications of acute gastric catarrh, when the urine is usually scanty, high colored and loaded with lithates; and Scudamore§ refers to erythema and urticaria shortly preceding a paroxysm of gout, when, as we know the urinary secretion presents changes similar to those cited. Dr. Murchison‖ also records a curious case of a gentleman, aged 42, who suffered from several symptoms of liver derangement until he had a severe attack of urticaria, when they ceased, and he had thereafter only occasional attacks of gout.

I may, finally, mention that urticaria sometimes occurs during or just following other diseases, in which we know the urinary secretion to be deranged, as in scarlatina, of which I have lately seen a striking case.

In one case of urticaria in which I examined the urine four times, I found it rather high colored and very acid, the specific gravity of the four specimens averaged 1.027½, the lowest being

* Functional derangements of the liver, New York, 1875, p. 142.

† Skin Diseases, 3d Edit. London, 1873, pp. 120, 126.

‡ Diseases of the Stomach, 3d Edit., London, 1872 p. 105.

§ A treatise on the nature of Gout and Rheumatism, 1st Amer. Edit., Phil., 1819, pp. 51, 226.

‖ Loc. Cit., pp. 129, 130.

1.024, when under treatment, the highest being 1.030, passed the previous night. Microscopically there were amorphous urates and oxalate of lime.

VI. **Erythema.**—I have incidentally mentioned this disease as occuring in the same state as urticaria. The connection of erythema with rheumatism is now well established, especially those forms known as erythema nodosum and erythema papulatum, and in these cases we would expect to find urinary derangements. Wilson* mentions a case of erythema tuberosum where the patient, a young woman aged 22, had copious deposits in her urine, with dysuria.

In a very annoying and rebellious case of erythema, of which I have six observations on the urine, it was strongly and persistently acid, except when under strictest regimen and severe alkaline treatment. The specific gravity was not above normal, it varying between 1.012 and 1.022, with an average of 1.018. Every specimen contained abnormal crystalline deposits, sometimes the urates, sometimes oxalate of lime; occasionally both. In another equally distressing case of erythema of the face, the urine stood at 1.030 with an abundant pinkish deposit of amorphous urates with oxalate of lime. I also have record of the examination of the urine from a case of erythema urticatum, in which both morning and night specimens were very acid, of a specific gravity of 1.015 and 1.020 respectively, and both contained oxalate of lime. The urine from a patient with erythema papulatum gave almost exactly the same results.

Gintrac† says, "In erythema nodosum the urine is more or less colored."

VII. **Eczema.**—Passing now to the protean disease eczema, we find that the recorded observations all show derangement of the important excretion, the urine.

Bence Jones‡ gives the following case: W. S., aged 64, dyspeptic, has, for 12 years, had dry and moist eczema. For the past two years has had at times frequent calls to urinate, but the quantity of urine often varied much from day to day. Thus:

On Feb. 13, he passed	oz.
At 2 A. M.	4
" 3.30 "	5
" 7.30 "	6
" 8.30 "	6
" 10 Breakfast	
" 12 noon	7
" 2 P. M.	4
" 4.15 "	4
" 6 Dinner	
" 8 P. M.	4
" 12 night	4
	44 oz. Sp. gr. 1.015

On Feb. 14, he passed	oz.
At 7 A. M.	8
" 8 " Breakfast	
" 10 "	2
" 2 P. M.	4
" Dinner	
" 5.30 P. M.	4
" 8 "	2½
" 12 "	2½
	23 oz. Sp. gr. 1.026

* Diseases of the skin. London, 1871, p. 239.
† Cours théor. et clin. de Path. int. Vol. V. p. 112.
‡ Lectures on Pathology and Therapeutics. Lond. 1867, p. 98.

Oxalate of lime existed in the first specimen, free uric acid and the urates in the second.

Dr. Hillier* saved the urine of a patient aged 19, for six days while an eczema was at its worst, and found the urea and uric acid both below the normal standard. In another case of general eczema of 30 years' standing, the urine was found to deposit lithates and lithic acid very abundantly, also some oxalate of lime.

Dr. Wm. Frank Smith† watched the urine of a large number of cases of inveterate eczema, and in 9 out of 10 he found *indican* present in pathological quantities. The patient was a robust man, aged 47, convalescent from eczema of both legs under alkaline lotions, taking no medicine, having full meat diet, with exercise, and one pint of beer daily. The mean of ten observations, gave, for 24 hours:

Quantity		1200 C. c.
Specific gravity		1.018
Urea	22	grammes.
Chloride of sodium	4	"
Phosphoric acid. .	4	"
Sulphuric acid....	4	"

The mean also of three analyses from another patient, having eczema of arms and hands, living in his ordinary manner at home and taking no medicine, gave as follows:

Quantity		1000 C. c.
Specific gravity		1.015
Urea	15	grammes.
Chloride of sodium	1.5	"
Sulphuric acid	2.0	"
Phosphoric acid	2.5	"

A third case, aged 27, with eczema of face and neck, gave:

Quantity		1200 C. c
Specific gravity		1.020
Urea	22.8	grammes.
Chloride of sodium	4.2	"

These analyses indicate an abnormally low excretion of urea, and the chlorides. He regards the urine as furnishing the key to the question as to the cause of the obstinacy of eczema.

Dr. A. T. Thompson‡ gives a case of eczema where the state of the urine was noted at times for the period of nearly five months, during most of which time it was scanty, high-colored and deposited lithates, its character being somewhat improved occasionally under treatment.

Dr. H. D. Bulkley§ gives cases where the same condition of urine was observed with a specific gravity of 1.030 and 1.035: this

* Skin Diseases, 2d Edit. Phila. 1870, pp. 120, 121.
† Journal of Cutaneous Medicine, Vol. I., p. 54.
‡ Diseases of the Skin. Lond. 1850, p. 275.
§ New York Medical Times, Vol. III., 1854, pp. 273, 275, 431.

state of the urine was recognized in the treatment followed. Dr. Edward Ballard * details the case of a female child, 4½ years old with eczema capitis, in whom there was persistent oxaluria, with a high specific gravity and a deposit, oftimes, of lithates and phosphates. The oxaluria "plainly fluctated with the progress of the eczema, the quantity of oxalates becoming increased whenever the formation of new vesicles was proceeding, and lessening or disappearing altogether as they died away, or were converted into crusts."

An interesting case of eczema, under the care of Dr. Robt. B. Todd, is given quite fully with analyses by Beale. † The patient, a laboring man of forty, had the whole body affected with a red scaling eczema of six months' duration. He had had two attacks previously. He was apparently healthy, and no cause of the eruption was discovered, except that he had lived almost exclusively on pigs' meat and potatoes. His urine during a month ranged from a density of 1.038 to 1.015, in quantity from 3 pints to 22 ounces, and in appearance from a high colored and turbid fluid, even dark brown, with abundant deposit, to a clear pale color and no deposit. When the urine stood at 1.038, very acid and the quantity 24 ounces in the day, it was analyzed by Dr. Beale, with the following results:

		In 100 parts of solid matter.
Water	926.1	
Solid Matter	73.9	
Urea	24.030	32.31
Extractive matter	27.210	36.82
Vesical mucus and lithic acid	.460	.62
Earthy phoshates	.970	1.31
Chloride of sodium	4.060	5.49
Other salts soluble in water	1.170	1.58
Sulphate of potash	6.828	9.24
" " soda	6.169	8.34
Phosphate of soda	3.290	4.45

The high specific gravity was due to the sulphates; this great excretion of the sulphates, independently of muscular exertion, formed an interesting feature in the case. The quantity of urine was below the average amount found in health.

In another case mentioned by Dr. Todd, a boy of 18, with eczema of the legs, scrotum and penis, there were abundant deposits of lithates and oxalates, and an analysis is given which does not possess any great interest.

Dr. Naylor ‡ recognizes the scanty and loaded state of the urine, with crystals of urate of soda in acute and general eczema, and very wisely remarks, "This latter condition is too often overlooked, and yet no truer guide can be taken, denoting a progressive improvement, or the reverse," which corresponds exactly to what experience has taught me, as will be mentioned later.

* Provin. Med. Jour., Sept. 8, 1847, p. 490.
† Lond. Med. Times & Gaz. 1852, Vol. II., pp. 890, 559.
‡ Diseases of the Skin, 2nd Edit. Lond. 1874, p. 122

Dr. Parkes * gives quite fully the elaborate analyses of Beneke in a case of acute impetiginous eczema, covering almost the entire body. I will not quote it in full, but merely state that oxalate of lime was found miscroscopically, and that the urea was in some excess during the period of severe disease, and that the uric acid exceeded the normal amount during convalescence. The specific gravity was low, 1.014,3 when taking no medicine, but the daily quantity was large, 2023 grammes (80 oz.) These results differ in some respects from others quoted, and from my own, but the discrepancy is explained by the fact that a large share of the secreting surface of the skin was impaired by disease, and when this is the case there must be increased secretion both of urea and water. Thus, Dr. Golding Bird † says, "As a general rule, whenever the functions of the skin are impaired, where a due amount of excretion is not exhaled from the surface, an excess of nitrogen is retained in the blood and ultimately separated by the kidney in the form of urate of ammonia, or perhaps urea or creatine. A person in apparently good health experiences from exposure to a current of cold air a slight check to perspiration, and the next time he empties his bladder he voids urine of a deeper color than is usual with him, and on cooling it becomes turbid from the precipitation of urate of ammonia. The explanation of this phenomenon, with which every one is familiar, is found in the kidneys assuming temporarily a kind of compensating function of the skin."

Dr. Garrod ‡ recognizes the frequent connection of eczema with the gouty habit. Dr. Murchison § states that his experience fully bears out the correctness of the observations of the connection of eczema with the gouty diathesis, but very conclusively and correctly ascribes the disordered blood-state, or lithæmia to functional derangement of the liver. Dr. Golding Bird ‖ says, "I have two or three times been consulted in cases of patients lying bed-ridden from rheumatic gout, one or both legs being covered with an eczematous eruption, and the parts on which the exudation had dried, have been actually frosted over with microscopic crystals of urate of soda. Dr. Tilbury Fox ¶ writes, "All disorders which are connected with the retention of excreta in the system, and their circulation throughout the blood-current, may furnish the exciting cause of eczema. This is a clinical fact of very great importance. Given the tendency to eczema, then the transmission of uric acid through the capillaries of the skin will so far derange as to aggravate certainly, and now and again excite an eczematous eruption. This is what is meant by gouty eczema; and by securing the absence of the uric acid from the circulation,

* The Composition of the Urine. Lond. 1860, p. 298.
† Urinary Deposits, 2d Amer. Edit. Phila. 1851, p. 116.
‡ Reynolds' System of Medicine, Vol. I., p. 824.
§ Functional Derangements of the Liver, New York, 1875, p. 140.
‖ Urinary Deposits, 2d Amer. Edit., Phil., 1851, p. 117.
¶ Skin Diseases. 3d Edit., Lond., 1873, p. 175.

the eczema will often disappear, and always be more amenable to treatment. * * * In some of these cases of eczema there is, and has been for some time a dificient kidney secretion, and if careful analysis of the urine be made a deficiency in exertion will be observed."

Gigot-Suard * gives the results of the administration of silicate of soda administered to an eczematous patient for 23 days, in quantities increasing from 30 to 80 centigrammes daily. The specific gravity of the urine was diminished, the quantity increased and the deposit of urates and uric acid ceased.

Dr. Mapother † makes an interesting contribution to the urinary relations of eczema. Patrick M——, aged 50, had had eczema on front of both arms and forearms and thighs for seven weeks; for years he had been subject to acid eructations, and had drunk freely of porter. The urine of each twenty-four hours gave the following record:

DATE.	OUNCES.	SPEC. GR.	REMARKS.	TREATMENT.
Jan. 16	26½	1.028	Very acid—urates	No treatment.
" 17	24½	1.030	do	
" 18	22½	1.031	do	Fifteen drops of Wine of Colchicum, thrice daily.
" 19	24	1.031	do	
" 20	26	1.030		Thirty drops of Wine of Colchicum, thrice daily; producing three or four small evacuations from the bowels daily.
" 21	40	1.020		
" 22	37	1.023	.....	
" 23	20	1.026		
" 24	34	1.030		
" 25	49	1.018	Neutral	Five grains of citrate of lithia with twenty grains of citrate of potassa, thrice daily.
" 26	38	1.028	do	
" 27	39	1.029	do	
" 28	42	1.025	do	

But little improvement took place in the eczema until the administration of the lithia and potash on the 24th, but, in four days afterward the disease was largely removed.

My own observations in eczema accord very completely with what has been quoted. Of the 46 patients, of whose urine I have records, it may safely be stated that not in a single instance did that secretion represent a state of perfect health. In one patient it was examined 26 times, in another 9, in another 8, in another 6, and 4 times each in 9 other patients, with almost uniform results, except when under the direct influence of medication. The total number of my recorded urinary observations in eczema amounts to 147.

The changes I have noted in the urine of eczema may be divided into two classes: *First*, those indicating an acid dyspepsia, shown by the presence of oxalate of lime, and occasionally urates, or even uric acid, with an oftimes greatly varying quantity and specific gravity, as in the case cited above from Bence Jones,

* L'Herpétisme, etc., Paris, 1874, p. 396.

† Lectures on Skin Diseases. 2d edit. 1875, p. 78.

where on one day 45 ounces, with a specific gravity of 1.015, was discharged, and on the next but 23 ounces, indicating 1.026. I have also noted this variety, with the urine of a pale yellow or straw color, with a specific gravity as low as 1.010, in the morning specimen, passed on rising,* when that passed by the same patient on retiring stood at 1.028; the extremes I have noted were 1.005 and 1.030: or, there also may be in this dyspeptic variety a persistent abnormal acidity and high specific gravity, as in one case of eczema of the anus, where oxaluria was very obstinate, and the average of 26 examinations gave a specific gravity of over 1.026½, the lowest being 1.020, when under diluents and alkalies, and the highest 1.030; *Second*, where the uric or lithic acid diathesis, or better, perhaps, chronic lithæmia exists, where the urine is also unnaturally acid at almost, if not quite, all times, and deposits a moderate amount of urates or free uric acid. The specific gravity of the urine in this second class of patients does not vary so much, but generally remains rather above the normal, 1.020 to 1.026. The average specific gravity of the urine from patients with various forms of eczema, a few acute, mostly chronic, gave 1.022; in the 46 cases it was not recorded as having an alkaline reaction on passing, or soon after, in a single instance, while many specimens are recorded as "very acid." Two or three specimens it is true, are noted as neutral or alkaline, but I find that the test was made two or more days after the urine was voided, so that the alkaline fermentation had probably set in, and these instances may safely be excluded.

The amorphous urates were not infrequently met with, being noted as found in 26 of the 46, cases; oxalate of lime appeared in 25, and free uric acid was seen in 10. Albumen is rarely found in the urine of eczema, in but two of the cases was it noticed that there was "a trace," the other specimens from these same patients being free, as also all the others. It must be looked upon as a coincident phenomenon; although, conversely, the presence of urea in the blood in chronic albuminuria may sometimes be the exciting cause of a very intractable eczema.

VIII. **Psoriasis.**—Even more than eczema, has this disease been looked upon as a cutaneous manifestation of a gouty state. Sir Henry Holland † says, "I cannot doubt from my own observation that certain of these (skin) disorders occur as effects of the habit in question (gout). I have so often seen psoriasis, for example, occurring in gouty families—sometimes alternating with acute attacks of that disease, sometimes suspended by them, sometimes seeming to prevent them in individuals thus disposed — that it is difficult not to assign the same morbid cause to these results." Dr. Garrod ‡ believes that psoriasis is, perhaps, the most frequent

* It will be remembered that normal urine "first discharged in the morning is usually dense, highly colored, of a strong acid reaction, and a high specific gravity." Dalton, Physiology, Phil. 1866, p. 351.

† Medical Notes and Reflections. Phil. 1857, p. 212.

‡ Reynolds' System of Medicine. Phil. 1868, Vol. I. p. 824.

form in which the cutaneous (gouty) disease manifests itself, and that there are records of many cases in which the skin and joint-affection are alternated. Sir Thomas Watson,* speaking of psoriasis and lepra says, "I believe that they sometimes depend upon the presence, or the generation, of an excess of acid in the system; and that they are often cured by alkaline remedies, I am sure." Prout† mentions the alternation of leprous and scaly skin diseases with deposits of phosphate of lime in the urine, in patients who have been subject to gout and rheumatism, the urinary affection becoming better as the cutaneous affection has become worse, and *vice versa*. In these cases the urine has had a low specific gravity.

With reference, however, to direct examination of the urine in psoriasis, I can find but three statements, one by Golding Bird,‡ to the effect that in cases of lepra, psoriasis and ichthyosis, where the excreting functions of the skin have been much impaired, the urine has been much richer in urea than was consistent with health,"; another by Nayler §, who remarks that in cases of psoriasis where the irritation of the skin is excessive it will be well to examine the urine, which will often be found to be high colored, and loaded with the urates; and third, an analysis by Beale.‖

This latter observer examined the urine from a very severe case of psoriasis in a girl aged 20, which had recurred for many years, in the spring of the year. About 40 oz. were passed in the 24 hours, with a specific gravity of 1.021. The analysis gave:

Water		957.50
Soluble matter		42.50
Urea	15.00	
Other organic matter	6.20	
Fixed salts	21.30	
Chlorides	13.00	

Seven and a half months afterwards the urine was again examined, and the total of 24 hours gave a specific gravity of 1.007, was neutral in reaction and yielded the following analysis:—

Water		985.40
Solid matter		14.60
Urea	5.90	
Uric acid	.45	
Extract and ammoniacal salts	.65	
Fixed alkaline salts	7.31	
Earthy phosphates	.29	
Chlorides	5.00	
Sulphates	.45	

Dr. Beale thinks the large amount of the fixed salts to be the most interesting point in these analyses, about double the normal amount of saline matter was found; he also regards that the large amount

* Practice of Physic. Phil. 1858, p. 1205.
† Stomach and Renal diseases Phil. 1843, p. 221.
‡ Urinary deposits. 2d Am. Edit. Phil. 1851, p. 117.
§ Diseases of the Skin. 2d Edit. London 1874, p. 40.
‖ Beale's Archives of Med., Vol. I., p. 316.

of organic matter thrown off by the disease in the scales had caused a diminution of the organic constituents of the urine.

Three weeks later, the patient being much improved, analysis gave :

Water		971.3
Solid matter		28.7
Urea	10.5	
Extraction	3.6	
Salts	14.6	
Chlorides	7.0	

My observations of the urine in psoriasis have been comparatively few in number, 36 relating to 14 patients, but they are sufficient to support the view of the assimilative error which either underlies or at least manifests itself during many of the diseases of the skin of constitutional origin. Most of the examinations I have made in psoriatic patients show a hyper-acidity, with crystalline deposits, uric acid, urates and oxalate of lime and in one instance the stellar phosphate of lime ; their absence being rather an exception. The specific gravity of psoriatic urine is not necessarily high, but may vary greatly at times. Nor is there any uniformity as to the time of the high or low specific gravity ; in one patient six examinations at intervals of about a week between each couple, gave the following :— night, 1.026 ; morning 1.014 ; night 1.010 ; morning, 1.008 ; night, 1.026 ; morning, 1.008 ; in another patient the average of four examinations was almost 1.025.

IX. **Acne.**—I have not been able to find any allusions to the urine in patients affected with *acne*, except a single line by Dr. A. T. Thomson,* who says of acne simplex, " The urine deposits a yellowish or whitish sediment, indicative of indigestion " ; and can therefore give only my own observations. Garrod,* however, states that "acne of the face and other parts is sometimes found to be closely dependent on the gouty diathesis, and," he says, " I have known one case in which the patient could predict the advent of a gouty paroxysm from the appearance of these spots."

Urinary derangement is very common indeed in patients with acne simplex, indurata and rosacea, also in the simpler forms of acne sebacea, or seborrhœa and acne punctata or comedo. Although my recorded examinations are relatively few, I feel confident in asserting that a very large share of the cases of acne, which are of any duration, will be found thus associated. In but two out of 61 examinations, relating to 22 patients with acne, was the urine recorded as other than acid, and in one of these it was neutral in the night specimen and acid in the morning, in the other case in which it was recorded neutral in one instance, the urine passed three hours afterwards was acid, as also all the other specimens. Very many of the reactions are stated as very acid. The specific gravity of the urines ranged from 1.014 to 1.040,with the average of over 1.023.

* Diseases of the Skin. 2d Edit. London, 1850, p. 404.
† Reynolds' System of Medicine. Phil. 1868, Vol. I, p. 824.

The urinary changes in acne are more commonly those of dyspepsia, oxalate of lime being not an infrequent microscopic deposit, one case presented it very abundantly and persistently; also uric acid and the urates. Another element of the urine of a proportion of acne patients is the presence of an abnormal amount of the phosphates, discovered either by boiling, which causes a pale whitish precipitate, soluble at once by nitric acid, or found microscopically soon after voiding, that is, before the decomposition has taken place which produces the triple phosphates, which latter form may occur in almost any urine.

These recorded examinations, however, form but a portion of my evidence of the urinary derangements in acne. On looking over my many and complete notes of cases I find very abundant testimony from the statements of patients, of changes which they themselves have detected, such as persistent high color at times, with much lateritious deposit, staining the vessel, burning on passing, frequent calls at night to pass water, and great variations in the quantity and color, which they have noticed, from an abundant flow of pale, limpid, straw-colored urine to a scanty, irritating, red or muddy fluid.

I mentioned above that urinary derangements would be found in cases of acne of long duration; this statement should be modified, for when the eruption is provoked or kept up by a reflex uterine disturbance, or by local causes as cosmetics, heat, cold, etc., the kidney secretion may or may not present these changes; but I would here throw out the caution, not to imagine because a patient has uterine difficulty that therefore the acne must be dependent on that, for I have had opportunities of removing acne by a careful attention to the digestive functions, with a small amount of medication, internal and external, long before the uterine disorder which existed had been rectified by the physician having it in charge.

X. **Pruritus.**—In a few cases of *pruritus* in which I examined the urine I found it to be loaded with urates and of a high specific gravity and of much greater acidity than normal; in some cases oxalate of lime was found. In one case of pruritus of the vulva repeated examinations failed to detect any sugar in the urine, unless it were a trace on one examination, the urine ranging in specific gravity from 1.014 to 1.038, the average of eight examinations giving 1.026½. After a month or so, my friend Dr. Oscar Simon, of Berlin, to whom I referred the case during her stay in Europe, reported quite an appreciable quantity of sugar, and her pruritic difficulty was very greatly relieved after a visit to one of the mineral springs of Germany and the adoption of an anti-diabetic regimen. In this case there were boils and carbuncles, and I expected to find the glycosuric state, but looked for it in vain. The patient was an elderly lady, and recalls the remark of Trousseau* that "eczema of the genitals in elderly women will very frequently be found to depend on glycosuria." The same

* Trousseau, Syd. Soc. Edit., Vol. III., p 503.

statement is made in substance by Dickinson,* who also speaks of the boils and carbuncles accompanying diabetes mellitus, though he does not subscribe to Prout's affirmation that diabetes always accompanies carbuncles and malignant boils, or abscesses allied to carbuncles.

In this connection I may allude to a curious statement of Prout, which is important if verified. Speaking of the causation of diabetes mellitus he says ;† "Another class of causes, or rather concurrent diseases, are various affections of the cutaneous and cellular tissues. I have seen several instances referable to this class; and were I permitted to draw a general inference from my experience, I should say that diabetes usually *follows* cutaneous affections, and *accompanies* (perhaps *precedes*) the affections of the cellular tissues. Thus, I have several times had patients observe, that they were formerly subject to eruptions in various parts of the body, but that such eruptions disappeared after the diabetic complaint became established; nor do I remember more than two instances in which diabetes actually accompanied a severe cutaneous affection."

To return to pruritus. In another case of pruritus of the vulva I found in both morning and night specimens the specific gravity of the urine high, an acid reaction, and an abundant deposit of urates and some uric acid. In a most obstinate and distressing case of general pruritus, from no recognizable cause, which had lasted three or four years in a lady aged 23, the urine, *which had never before been examined*, was found to vary in density from 1.030 to 1.008, and from a milky opacity, soon after passing, to a pale straw color, without a particle of deposit. The first two examinations, morning and night, were each 1.030, very acid, and with very abundant deposits of urates and uric acid in large crystals; after taking acetate of potassa for two weeks the night urine presented much the same appearance, very acid, specific gravity 1.024. the morning specimens being faintly acid, limpid, of a pale straw color and a density of 1.008.

Dr. Purdon ‡ quotes Dr. Day in a statement "that pruritus is often accompanied (if not preceded) by a diminished secretion of urine," adding that "this may furnish us a hint in reference to treatment." Dr. A. T. Thompson § gives a case of pruritus in a man aged 74, where the urine was scanty and high colored, and after being broken down by the long continued irritation, boils appeared on various parts of the body. The urine became copious under treatment, and, when examined, was found to contain no trace of saccharine matter. Soon after the boils appeared the itching greatly abated, but after a lapse of three years was not yet completely removed. Dr. Murchison ‖ attributes much of the

* Diseases of the kidney, &c. Part I., Diabetes, London, 1875, p. 92.
† Stomach and Renal diseases. Philadelphia, 1843, p. 51.
‡ Cutaneous Medicine. London, 1875, p. 145.
§ Diseases of the skin. London, 1850. p. 216.
‖ Functional Derangements of the Liver. New York, 1875, p 144.

pruritus to hepatic derangement in which we know the urine is often abnormal.

XI. Herpes Zoster.—Simon * gives the analyses of urine by Heller in cases of *herpes zoster*. From them he concludes that "in herpes zoster the chief peculiarities are:

"1. A marked increase of the chlorides and phosphates, and a corresponding diminution of the sulphates. 2. An excess of hydro-chlorate of ammonia. 3. A large amount of fat. 4. A diminution in the amount of uric acid. An increase only occurs when the disease is accompanied with fever. 5. The presence of oxalate of lime may always be suspected in these cases."

I have the record of the examination of the urine of a lady some time previous to an attack of herpes zoster of the forehead. She was a very dyspeptic subject, the urine was very scanty, acid, specific gravity 1.028, had an abundant rather thick flocculent deposit, which showed oxalate of lime in considerable quantity, and triple phosphate 15 hours after passing, the urine having been kept cool.

XII. Pemphigus.—The urine in a case of pemphigus has also been analyzed by Heller †. The patient was a woman aged 40 years. The attack was very severe and proved fatal. The urine deposited a light cloudy sediment, consisting principally of mucus, but also containing fat molecules, urate of ammonia, and a few epithelium scales. It was acid, and its specific gravity was 1.017½. It contained in 1000 parts:

Water	955.80
Solid constituent	44.20
Urea	24.63
Uric acid	0.58
Extractive matter	11.79
Fixed salts	7.20

Of the fixed salts the earthy phosphates were normal, the sulphates much increased, and the chloride of sodium proportionately diminished. The urea was considerably above the normal average.

"In the case of a little boy affected with acute pemphigus, Dr. Marris Wilson found the quantity of urine passed in 24 hours much below the average, namely, about 12 ounces, its specific gravity high, namely, 1.033, and its reaction powerfully acid. It was of a light color, depositing on standing a light flocculent cloud, containing minute crystals of oxalate of lime, and was loaded with urea. In 1000 parts the quantity of solid constituents was 78.89. Bamberger found the urine in pemphigus scanty, acid, of high specific gravity, rich in urea, uric acid, and the earthy phosphates, poor in phosphoric and sulphuric acids, but abundant in ammonia. He also found ammonia in the blood and in the fluid of the bullæ, the blood being poor in solids, especially albumen. Hence he suggests as a proper treatment the use of an

* Animal Chemistry, Syd. Edit., 1846, Vol. II., p. 320.
† Simon's Animal Chemistry, Syd. Edit., 1846, Vol. II. p. 322.

easily assimilable albuminous diet and hydrochloric acid."* It may be here stated, in connection with the great amount of urea in the urine in this disease, that Simon† failed to find any trace of urea in the fluid from the blisters of pemphigus, examined in two attacks at an interval of five years.

XIII. **Purpura.**—In a case of purpura in a girl 20 years old, Simon‡ found the urine for a fortnight of a dark brown color, of a disagreeable ammoniacal odor, and with alkaline reaction. "It deposited a viscid sediment of earthy phosphates, urate of ammonia, and mucus. The addition of nitric acid indicated the presence of a small quantity of bile-pigment. During her recovery the urine returned to its original state. Heller gives the analyses of urine from two cases, in a girl aged 19, and a boy of 16 years. The specific gravity ranged from 1.012 to 1.021, the reaction was faintly acid, and traces of albumen could always be detected in the urine of the boy till convalescence appeared. Heller observes that the augmentation of the ammonia (in the form of hydrochlorate) and of the uric acid, together with the diminution of the chloride of sodium—characters seemingly associated with this disease—indicate that the blood must be in a state of dissolution. In a case observed by Martin, the secretion was very scanty, about one or two ounces being passed at a time, and the daily amount being from 12–20 ounces. Its reaction was faintly acid, three analyses at intervals of 12 and 22 days, gave a specific gravity of 1.013.40, 1.021.26, and 1.010.31 respectively.

In its physical characters it resembled the urine of Heller's cases, namely, of an intensely yellowish-brown color, rather turbid and depositing flocks of mucus. The odor, at first ordinary, rapidly became ammoniacal." A. T. Thompson§ gives a case of pemphigus with supervening purpura, where the urine deposited sediment consisting of lithates, had a specific gravity of 1.026 and contained a large excess of urea, phenomena which, as we have just seen, belong rather to the pemphigus than to purpura. Wilson‖ mentions a case of bullous purpura in a rheumatic and dyspeptic man, aged 42, in whom the urine was scanty, and high colored, with red sediment. The urine in purpura sometimes contains blood, at other times casts of the renal tubes.¶

In the only case of purpura of which I have made the examination, I found the urine acid, with a specific gravity of 1.025 morning and night, color light, with large crystals of uric acid in the morning urine, 12 hours after passing, and amorphous urates deposited very abundantly in the night specimen, after standing three days.

XIV. **Melano-Sarcoma.**—In a remarkable case of melano-

* Wilson. Diseases of the Skin. London, 1867, p. 305.
See also—Lafaurie, Pemphigus-Diagnose. Wirzburg, 1856, p. 37.
† Animal Chemistry, Syd. Edit., London, 1846. Vol. II., p. 488.
‡ Loc. cit, p. 259.
§ Skin Diseases. London, 1850, p. 182.
Diseases of the Skin. London, 1867, p. 350.
¶ Hillier. Reynolds' Syst. of Med. Phil., 1868. Vol. I., p. 759

sarcoma of the skin I found the urine very acid, with a specific gravity of 1.020, urates quite abundant and with a moderate amount of oxalate of lime. The color varied from time to time, occasionally being as dark as rather black, clear coffee, then again nearly the color of sherry wine. Sometimes it was quite muddy from the urates, again it would remain clear for a long time. The sediment, which at times was quite abundant, was, besides the urates and oxalates, made up of irregular pigment masses and particles, largely amorphous, but many of them were apparently within epithelial cells, the size of those from the pelvis of the kidney, and many resembling the pigment celloids of Roberts.* Toward the end of the patient's life, the urine diminished greatly in quantity.

XV. **Elephantiasis Græcorum**—The urine of *leprosy*, or elephantiasis græcorum, has been analyzed by several,† and found to possess certain pathological interest, but the disease being very rare in this country, I need not dwell on it. I will state, however, that albumen is commonly found in it, and a very decided diminution in the quantity of urea, a state akin to Bright's disease, with the with exception of the renal casts.

XVI. **Addison's Disease.**—*Supra-renal melasma.* Certain changes have been observed in the urine passed by patients with the *bronzed skin disease*, the main features being a diminished quantity, generally low specific gravity, and a deficiency in solid constituents: albumen has been found. ‡

XVII. **Ichthyosis.**—I will close this lengthy and perhaps tedious recital of facts by quoting from Mr. Nayler,§ who furnishes us with some very interesting details in regard to the urinary changes in *ichthyosis*. Says he: "The total arrest of all sensible perspiration in general ichthyosis, and its partial secretion only in some of the modified forms of the complaint offer an interesting subject for investigation, with respect to the state of the urine." He carefully determined the urine passed in 24 hours, for several days in succession, by two patients with this disease, and found that the quantity was very great, the specific gravity low, the color of the palest yellow, and the reaction but slightly acid. In a third case, a boy 11 years old, height 52 inches, weight 57½ lbs., in which the scales were numerous and entirely enveloped the trunk, he made very careful analytical investigations, and compared the results with those obtained from three children of nearly the same

* Urinary and Renal Diseases, Phil., 1866, p. 96.

† Milton—Diseases of the Skin: Lond. 1872, pp. 305–313. Also, Journal of Cutaneous Medicine, etc., Lond 1870, Vol. IV., p. 178. Also, Moralli-Schmidt's Jahrb., 83, p. 9. Also, Parkes—The Composition of the Urine: 1860, p. 333. Also, Duckworth—St. Barth. Hosp. Rep.: 1874. Also, Renault—The Doctor: May, 1874, p. 95.

‡ Greenhow—Lancet, March 6th, 1865, p. 328.
Also, West—Roy. Med. and Chir. Soc., Nov. 10th, 1874.
Also, Rosenstirn—Virchow's Archiv. Bd. LVI: Reprint, Würzburg Inaug. Abh. Berlin, 1872 pp. 13.

§ Diseases of the Skin: London, 1874, pp. 74–78.

age, etc. He comes to the following conclusions: 1. Notwithstanding the small rate per cent. of urea, the absolute amount in 24 hours is little altered in ichthyosis; and this is somewhat remarkable when we consider that the skin, as a secreting organ, is reduced to the lowest possible limits in this disease. 2. The quantity of sulphuric and phosphoric acids, is hardly, if at all, affected in ichthyosis. 3. No hippuric acid crystals were detected by examination with the microscope. Schlossberger is said to have demonstrated hippuric acid in the scales of ichthyosis. (Neubauer on the Urine, p. 34.) None, however, could be detected in the above case, after a most careful analysis by Dr. Marcet."

In contrast with the large quantity of urine in ichthyosis reported by Nayler, Dr. A. T. Thompson* mentions a case of ichthyosis covering a large portion of the body, in a boy 15 years old, in whom, when first seen, the urine measured but 3 ounces in 12 hours; it had a specific gravity of 1.030, and was turbid from urates. After four days' treatment he passed 12 ounces in 24 hours, with a specific gravity of 1.016, with further improvement later.

XVIII. **Xeroderma.**—In two cases of *Xeroderma*, a mild form of ichthyosis, in which I observed the urine, I found it as follows: in one case a specimen passed at 11 A.M., and examined 12 hours afterward, was alkaline. There was an abundant deposit, which, when shaken, rendered the fluid milky white, but which dissolved completely on adding nitric acid, and consisted wholly of amorphous phosphates. The urine passed the same night was very acid, specific gravity 1.010, of a yellow color, clear, no sediment, and microscopically a moderate amount of oxalate of lime was found. The specimen passed on rising the next morning was also very acid, specific gravity, 1.018, of a lemon color, with a very slight mucous deposit, and having also an abundance of large crystals of oxalate of lime. In the other case, the night and morning urine had a specific gravity of 1.027 and 1.016 respectively, were of a yellow and pale lemon color, with moderately acid reactions, a normal flocculent deposit in both, and an abundance of small crystals of oxalate of lime in the specimen passed on retiring.

It will not be possible, within the limits of this paper, to analyze perfectly the mass of material which I have here presented, but the urinary alterations which have been recorded are given thus in full, in order to make indelible the impression that the urine is a most important element to consider in the study and practice of Dermatology. In not one of the more than 16 diseases mentioned, where the skin is affected, was the urine found normal, and in many instances the pathological changes are clear and well marked, involving important prognostic and therapeutic considerations.

I may, however, briefly recapitulate the main points in what has preceded, as follows:

1. The urine represents the state of the blood, as well as the

* London Med. Gaz., July 3, 1846, p. 35.

integrity of the kidneys, and conversely the state of the secretion from the skin, and is therefore of very great importance in the study and treatment of diseases of the skin.

2. The circulation in the blood of excrementitious substances, uric, hippuric and oxalic acids and urea, given experimentally, has been followed by eruptions on the skin.

3. Uric acid is found in the blood of gouty patients, also in blisters raised upon them. It has also been found in the fluid contained in the vesicles of eczema. Urate and phosphate of soda have been recovered from the contents of pemphigoid bullæ in a case of psoriasis, and uric acid has also been discovered in the scales of psoriasis. Hippuric acid has been demonstrated in the scales of ichthyosis.

4. Urea is a normal ingredient of the sweat, has been recovered in notable quantity from the perspiration of a gouty patient in a Turkish bath, and has also been found to be excreted in quantity on the skin in certain fatal cases of chronic kidney disease. Urate of soda has been found crystallized on the skin of eczematous legs, in gouty patients.

5. The rate of secretion of the urine varies greatly with the state of the cutaneous surface, cold applications increasing and warm diminishing it. Daily bathing increases the total solid constituents in the urine, the urea and uric acid being increased. Profuse sweating diminishes the quantity, raises the specific gravity, increases the urates and chlorides. Complete suppression of exhalation by varnishing the skin causes death from uræmia, with albuminuria and the production of triple phosphates in various parts of the body.

6. The urine, during the acute febrile diseases of the skin, presents features such as might be expected from the extensive damage to its secreting powers occurring in these affections.

(*a*) In *erysipelas* the urea in the urine is increased somewhat, the uric acid augmented three fold, the chloride of sodium diminished, and albumen not unfrequently appears.

(*b*) In *measles* the urine is rich in uric acid and urates, lower products of metamorphosis, albumen and blood, are not uncommon.

(*c*) In *scarlet fever* the urea is not necessarily increased; uric acid is almost entirely suppressed at first and largely in excess at the close of the fever; the chloride of sodium is diminished. Sediments of uric acid and urates are common and albumen and epithelium and casts generally appear.

(*d*) In *small pox* the quantity of urine is diminished and its specific gravity not proportionately increased; uric acid is precipitated and the chlorides are diminished. Albumen is sometimes seen.

7. In the chronic diseases of the skin the urine exhibits alterations of two kinds: *first*, those due to assimilative disorder, corresponding to those known to accompany derangement of the liver,

dyspepsia and alterations due to hereditary disposition, a diathetic state closely allied to gout and phthisis; and, *second*, those due to interference in the functions of the skin, as in extensive icthyosis and xeroderma, or in eczema or psoriasis covering much of the body, where the urinary changes may be regarded in a measure as secondary to the skin lesion.

(*a*) *Urticaria* is associated with a diminution of the urea and the organic salts in the urine and their probable retention in the system. The quantity of urine is small, the specific gravity high, urates and oxalates abound.

(*b*) *Erythema.* Here the urine is persistently acid with either an abundant deposit of urates or oxalate of lime.

(*c*) *Eczema* patients seldom pass large amounts of urine, the tendency is to scanty secretion, almost always unnaturally acid, with a specific gravity averaging above normal. Free uric acid, the urates and oxalate of lime abound, sometimes oxaluria is very persistent. Albumen is rarely seen. The urea and uric acid are often below the normal standard, although they may be in excess when a large portion of the integument is affected; indican has been found in pathological quantities; when the specific gravity is high it may be due to an increase in the sulphates. Chlorides are diminished.

(*d*) *Psoriasis* sometimes alternates with phosphatic urinary deposits in gouty subjects. Where the excretory functions of the skin are much impaired the urea is above normal. The fixed salts are increased. The urine shows generally a hyper-acidity with deposits of uric acid, urates and oxalate of lime, the contrary being rather the exception. The specific gravity is liable to great and unaccountable variations.

(*e*) *Acne.* Urinary derangements are very common in acne, generally those of dyspepsia, the quantity and the specific gravity varying greatly. Generally over acid, the urine deposits oxalate of lime, urates and uric acid. It is not uncommon to find the phosphates increased.

(*f*) *Pruritus* often gives very abundant uratic deposit, and sugar is sometimes present. In the aged, pruritus is often accompanied or preceded by diminished secretion of urine. The specific gravity may vary greatly.

(*g*) *Herpes zoster.* The chlorides and phosphates are increased, and the sulphates diminished; oxalate of lime present.

(*h*) *Pemphigus.* The sulphates and earthy phosphates are increased, chlorides diminished. Urea greatly above normal; oxalate of lime occurs. The quantity is small, specific gravity high and reaction very acid.

(*i*) *Purpura.* Albumen, blood and casts are sometimes found. The earthy phosphates, ammonia and uric acid are increased, chloride of sodium diminished. The

urine is scanty, with a low specific gravity and faintly acid reaction, giving traces of bile pigment.

(*j*) *Melano-sarcoma.* The urine brown, often of a dark copper color, at times depositing urates abundantly. The deep color due to pigment particles alone or enclosed in epithelial cells. The urine very acid, specific gravity about normal and towards the end of life the quantity of urine is much diminished.

(*k*) *Elephantiasis Græcorum.* Albumen is common, and the urea is diminished in the urine.

(*l*) *Addison's disease.* Bronzed-skin disease. Quantity of urine small, specific gravity generally low, solid constituents deficient: albumen sometimes.

(*m*) *Ichthyosis.* The quantity of urine is large and the specific gravity low, but the urea, though giving a small percentage, is unaltered in its total daily quantity. In one case the quantity of urine was greatly diminished, the specific gravity high and urates were deposited.

(*n*) *Xeroderma.* Urine diminished in quantity, varying in reaction, alkaline and acid, depositing, when alkaline, a large quantity of amorphous phosphates; or, clear and acid with oxalate of lime.

In order to determine how far this urinary disorder is really connected with the disease of the skin, we may refer to such investigations as those of Dr. Balman,* who examined the urine of a large number of patients with different chronic diseases. The highest proportion of disturbance was found in those with marked evidence of scrofula, as enlarged glands, and 74 per cent. of these cases gave oxalate of lime in the urine. Skin diseases came next, yielding 66 per cent., whereas the highest of other diseases was phthisis, in which 47 per cent. of the examinations showed oxalate of lime; rheumatism gave only 12 per cent.

The urinary alterations which have been recorded may largely be classed as those indicating imperfect systemic action, whereby excrementitious substances fail of their complete evolution into elements ready for excretion. The urea has been notably absent in many of the analyses we have quoted, while lower grades of metamorphosed tissue have taken its place, albumen, the urates or lithates and oxalate of lime, most prominently. In may instances the amount of urine has been far below the normal quantity, while the specific gravity, which should be high in such a case, is often low. Many times, however, we have quoted the specific gravity as abnormally high, but here the greater density is due to the *inorganic and earthy salts*, as especially exemplified in Todd's case of general eczema, with the analyses by Beale. In the case of urticaria it was shown that with the increase of urea and uric acid in the urine, under colchicum, the disease disappeared.

We cannot here enter upon special inquiry as to where this ma

* London Medical Gazette, Nov. 8, 1850.

assimilation and faulty disintegration takes place, other than to refer to the very high authority of Dr. Murchison, who has so clearly brought it home to the liver, that one is almost tempted to accredit that organ with every fault of nutrition. In our mind, however, a larger pathological idea prevails, and other organs, perchance the whole system, ofttimes, must bear a share. Recognizing fully the glycogenic,and depurative,and calorific functions of this great organ, the liver, I still see a cause of mal-assimilation and faulty disintegration in the possible derangement of the functions of the stomach, skin, kidneys, possibly also of the lesser organs, pancreas, etc., a disorder of any one of which, and the throwing of its work upon other organs, may cause chronic disease. Thus, much of the systemic disturbance resulting in gout or skin disease is traceable to primary indigestion, that is, to failure in the stomach to properly prepare the ingesta for the action of the other organs. Or, as a chilling of the cutaneous surface can produce internal disorder, manifested by a deposit of lithates in the urine, so chronic inactivity of the skin may have the same result; how constantly is the skin harsh and dry in the states of albuminuria, glycosuria and polyuria, and I have already shown urinary derangements to be common in cases where the skin is disabled, as in xeroderma, very general eczema or psoriasis, etc., and we know, moreover, that the action of the skin is apt to be very imperfect, even in cases of localized cutaneous disease.

We come now to the practical bearing of our study of the relations of the urine to diseases of the skin, namely:—

Therapeutical considerations. First we will take the matter of diet, hygiene and exercise. The variations in the urine both in connection with normal alimentation and the ingestion of injurious food have been very conclusively demonstrated by others, and it were well to regard these physiological considerations in the treatment of skin diseases. When the urine exhibits deposits of uric acid, urates, and oxalate of lime, there is evidence of imperfect action of the system, a sub-oxidation, whereby, in place of the complete combustion of the food, and the perfect elaboration of the products of dis-assimilation into urea, carbonic acid, water, and other elements fails, and oxalic acid represents, in the main, this failure in respect to starchy and saccharine food, and uric acid and the urates the same for nitrogenous elements; (though it is true that this is not absolutely the fact in every instance, oxalic acid being also derivable from albuminous compounds.) These changes in the urine, then, which we have shown to be so very common in patients with affections of the skin, show the latter to be more connected with assimilative disorder than is granted by some, or apt to be thought of by most practitioners. I cannot here enter further on the subject of the animal chemistry of these changes, but will merely state the practical lessons I have learned from them, without even stopping to give credit to the sources of my knowledge.

Over eating is not at all uncommon in skin patients, by this

means undue amounts of alimentary substances are taken into the blood and the urinary disorder is but an indication of this, an effort of nature to rid the system of unneeded supply; nature, as it were, considers it unnecessary, or is unable, to fully oxydize this waste matter, and throws it off partially disintegrated. Or, there may be over eating in one particular direction, one patient takes more sugar and starch than is needed, another more meat, a proper regulation in this respect conduces to health and consequently to recovery from skin diseases. Or, again, the amount taken at any one time may be greater than the organs can care for, some of the proximate elements enter partially elaborated and must pass off in the same manner; the remedy for this is frequent and small supplies of proper food, rightly prepared. But these urinary abnormalities, though often beneficial provisions of nature, cannot continue long without evils attending them, as we saw that experimentally the circulation of excrementitious substances caused disease.

Other elements in the production of urinary disorders are also such as induce skin disease, thus the use of fermented wines and ales often are the cause of both, or want of proper and sufficient air and exercise. No one of the elements which tend to good or bad health should be overlooked in treating skin diseases.

When speaking of the relations between the skin and kidney-functions, the alterations in the urine attending the use of baths was spoken of. This is a point too often neglected in Dermatological practice. We found that daily bathing augmented the total solid constituents of the urine, the urea and uric acid being increased, and frequent bathing, especially in baths slightly alkaline, and proper subsequent friction to the skin, will do much in removing cutaneous disease, both by accelerating the assimilative processes and keeping the pores of the skin in a condition to do their work. The benefits from visits to the mineral springs of Europe are largely due to this fact. Dr. Todd,* when speaking of acne, says, "in many diseases of the skin we have found the greatest benefit from sponging sound parts of the skin two or three times every morning, with a lotion consisting of two drachms of nitro-muriatic acid and two pints of water."

Finally, many medicines are of benefit in diseases of the skin by virtue of acting in a manner calculated to affect the urinary secretion. Dr. Easton † reports most satisfactory results from the use of acetate of potassa in eczema and psoriasis, given in half drachm doses three times a day, an experience which I have long verified, and he gives some interesting details of the urinary relations during its administration. The smallest amount of urine voided by any of his cases when under its influence was 54 ounces daily, the largest 120 ounces, an increase of about 14 ounces as a minimum, and 80 ounces as a maximum over that in health. The total solid constituents were also increased to 1026 grains daily for a mini-

* Copland's Encyclopedia of Pract. Med., 1833, Vol. I. p. 31.
† Monthly Med. Journ. 1850, p. 422. Braithwaite, Vol. XXI, p. 245.

mum, and 1320 for a maximum, or from 200 to 500 grains of solid matter daily above the average of health, and with this increase the skin affection rapidly improved. The same is shown in the case I have quoted of Dr. Mapother, where under the use of the citrates of lithia and potassa the total daily solids excreted by the urine, as estimated roughly by the specific gravity, increased about 200 grains as a minimum and 400 as a maximum, above that observed in the same patient before treatment. The use of alkalies in treating diseases of the skin is of old date and urged in strong terms by those with much experience in these affections. Dendy* thinks their efficacy specially during the period of childhood, due to their "improving the quantity and quality of the renal secretion, which, in skin diseases, are often so unhealthy." Colchicum we have seen to have this effect in urticaria, and the mineral acids in proper cases do the same.

From what has preceded it will be seen that I cannot subscribe to the views entertained by some as to the local nature and treatment of the many affections of the skin. The German school, in which I was myself instructed, has done much to improve local cutaneous therapeusis, but it has also done much to discredit the dependence of skin lesions upon internal disorders, and thereby has, in my opinion, done much harm. It is true that a large measure of success may be obtained by the judicious employment of local remedies and that therein much of the skill of the specialist is often shown, but it is also quite as true, or even more certain that we can afford most permanent and satisfactory relief in certain skin diseases by a proper regulation of diet, exercise and medication tending to restore and keep the assimilative functions in perfect order.

In the present paper I have desired to direct very serious attention to the importance of the urine as an element in the study and practice of Dermatology. To this end, in addition to quoting what I have been able to find on the subject, I have endeavored to give an account of the urine as I have actually observed it during the course of diseases of the skin, and I can affirm that I have received very great assistance at times from these examinations. I am well aware of their imperfection, but the desire was to present such methods of investigation as could, and should be made by every physician, involving mainly the quantity, acidity, specific gravity and gross appearances, together with a simple microscopic examination, easily made with the assistance of any good text book on the urine. To be of more real value to science, and perhaps to practice, the investigations should involve the entire quantity of urine voided in the 24 hours, and its total specific gravity, as well as that of morning and night urines, and the acidity should be tested by saturation with caustic soda. It would be further desirable, scientifically, to test the daily excretion of urea, and quantitive tests of other elements, would greatly

* Diseases of the skin during infancy and childhood. Phil. 1841, p. 20.

develop the subject. But the simple and practical measures we have employed and here reported, yield abundant reward in the confidence thereby given of a knowledge of the performance of its functions of the most important depurating organs of the body—the kidneys. Dr. Philips, in 1840, wrote* "In lepra and psoriasis you will commonly see the kidney endeavoring to perform the function which the skin has abandoned, you will find uric acid thrown down in considerable quantity in the urine * * * It will be very desirable in the different affections of the skin to test the urine, as well as the cutaneous exhalation."

In conclusion, I may add that although as yet a sufficient number of accurate observations have not been made in the various diseases of the skin to enable us to state positively that such and such changes belong necessarily to one disease, and such others to another, still the indications of urinary derangement in these affections are such as to invite further study, and at the same time to furnish ofttimes very valuable assistance in the daily treatment of diseases of the skin.

ON THE

RECOGNITION AND MANAGEMENT

OF THE

GOUTY STATE

IN

DISEASES OF THE SKIN.

BY L. DUNCAN BULKLEY, A. M., M. D.

Physician to the Skin Department, Demilt Dispensary, New York; Attending Physician for Skin Diseases at the Out Patient Department of the New York Hospital, Etc.

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GOUTY STATE IN DISEASES OF THE SKIN.

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Physician to the Skin Department, Demilt Dispensary, New York; Attending Physician for Skin Diseases at the Out-Patient Department of the New York Hospital, Etc.

In the present paper I desire, from a clinical stand-point, to impress upon my hearers the value and necessity of recognizing and treating the gouty state in many diseases of the skin. I say from a clinical stand-point, because many of the thoughts here given have come to me gradually, as developed by experience, and I wish that others may accept at once what I have been slow to perceive clinically. In an analysis of one thousand cases of skin disease in my private practice, now in process of preparation, I have been struck, on reading over the recorded histories, with the constant occurrence of the elements of gout either in patients themselves or in their immediate connections, and also with the very important part which the management of these elements has played in the cure of the cutaneous disease. I am also led to consider this subject in writing, be-

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cause in very many, if not in most instances, this gouty state had been neglected by the physicians previously in charge of the cases, and because even when I have called attention to the subject many have failed to recognize the facts or the importance of their bearing upon the case; but of the reality of the connection, in many instances, I have not a shadow of doubt, and of the therapeutical importance of the recognition I am very firmly convinced.

I may say, however, that it is often difficult to recognize these elements in poor practice, as in hospitals and dispensaries, probably because they do not exist to so great a degree among patients applying to such institutions as among the higher classes, for the reason that the causes, such as overeating and wine-drinking and indolence, are not conspicuous elements in the life of the middle and lower classes in this country. I may also add that considerable difference in the type of diseases, including those of the skin, is observed on careful study between those seen in private and those in public practice in a large city like New York; the same probably exists in other cities, which may in a measure account for discrepancies of opinion and fact, on the part of some, in regard to certain of the points brought forth hereafter. The same is true in other branches of medicine than dermatology, according as the observations are based on cases seen among the rich and better-to-do classes of society, and in the humbler and lower walks of life. As before remarked, the present paper is written with especial reference to cases occurring in private practice and among those who enjoy some or many of the luxuries of life, often wrongly so called.

It will be understood, of course, that no claim is made to a *discovery* of the influence of the gouty state in skin diseases, the connection has long been recognized by the French school of dermatology especially; but I wish to bring it more particularly to the notice of the profession in this country, upon a basis of large clinical study of recorded cases of patients in public as well as in private practice.

To a proper understanding of what is implied by the influence of the gouty state in diseases of the skin, it will be well first to define what is understood by the term "gouty state." When gout is spoken of, the unprofessional mind has at once suggested to it an exceedingly painful inflammation of one or more of the smaller joints of the extremities, notably that of the great toe. The physician who has given but little thought or study to the subject, at once remembers that gout may affect any of the organs of the body,—that there may be gout of the kidney, heart, liver, brain, etc. He who has gone somewhat more deeply into the subject recognizes that these are all but the phenomena resulting from a blood alteration which has been demonstrated, and that the presence of uric acid in the blood is the root of the evil, the attempted oxidation of which in the tissues gives rise to the local inflammations.

But if the phenomena of gout are not studied or observed further even than this, we will fail to note the connection which exists between the gouty state of which we speak and functional and other diseases of the system. The true student of the gouty state must go deeper into its pathology than the simple existence of inflammation of the joints, or of the internal organs of the body, and even deeper than the acid blood-state which is recognized as the foundation of these; he must seek for the causes of this state of the blood; he must search for the earlier manifestations of the blood alteration, which may be discovered a great while before the joints or viscera are inflamed or altered; he must recognize the elements which form the beginning of the long train of cause and effect which eventuates, if its course is unchecked or unchanged, in what is commonly known as gouty inflammation. The earlier links in the chain are quite as important as the late, or rather are much more important therapeutically, inasmuch as it is during this period that, by a proper regulation of the patient's life, with slight medication or by the "*management of the gouty state*," as the term is here employed, that we may do much to avert an evil which will surely come

if the earlier warnings, of more or less severity, are not heeded and acted upon. It is in this light that I look upon many of the cutaneous and mucous inflammations (for the mucous membrane is but the involuted skin) which often long precede the commonly recognized symptoms of gout; and I would no more neglect the warning given by them to the patient, and attempt to remove the eruption by local means alone (even were this possible), and thus fail to seek for the cause and remedy of his gouty state, than I would shoot a railroad employé who waved the red flag of danger before the open drawbridge, because his presence was distasteful to me and checked me in my homeward journey: the caution-signal may avert a great danger.

Our subject, then, divides itself into three parts:

First. The importance of recognizing certain skin diseases as the earlier manifestations of the gouty state, with a view of saving the patient from its later exhibitions, which are worse and may ultimately endanger life.

Second. The importance of recognizing the gouty state in certain diseases of the skin, because thereby we can best remove the cutaneous disease and prevent its recurrence; and,

Third. The management of the gouty state, especially in its earlier periods, during which the skin lesions are most apt to manifest themselves.

I am aware that there are some who deny, almost if not quite *in toto*, the internal causation of all diseases of the skin, and regard them wholly of local origin, either as the result of external causes or as local affections of the skin tissues. At the late meeting of the International Medical Congress at Philadelphia, in September last, one of the questions for discussion was, "Are eczema and psoriasis local diseases, or are they manifestations of constitutional disorders?" and the present writer was honored by the invitation to read a paper on the subject. During the subsequent discussion the side of the local pathology of these diseases was warmly advocated by several gentlemen familiar with diseases of the skin, but

the Section, or medical jury before which the case was argued, decided in favor of all the propositions offered by the writer, which showed the constitutional relations and nature of these affections; the main arguments brought forward in favor of this were based on their relations to the gouty state as understood in the present paper. I confess that I can not understand how this influence could have been so ignored as it has been by local pathologists, for surely a careful study of recorded private cases in sufficient numbers can not fail to convince the most skeptical of a very frequent coëxistence of many diseases of the skin and the phenomena now recognized by the best authorities as gouty, and a careful following out of the cases on paper, visit by visit, certainly shows that as one set of symptoms improve, the others commonly do the same, and *vice versa;* and that remedies affecting the one are of influence over the other. Unless the converse of our propositions can be demonstrated by an equal or greater number of recorded clinical facts as perfect in every respect, the opinions which have long ruled the medical mind and have been demonstrated again and again, in reference to the constitutional relations of certain cutaneous affections, must be accepted as true, and the dictum of any one school of dermatology can not decide the question to the contrary.

It will be understood, of course, that my remarks in regard to the gouty relations of dermal lesions do not refer to every disease of the skin: I recognize purely local affections, as epithelioma, also the parasitic diseases, vegetable and animal, the contagious exanthemata, syphilis, purpura, etc., as being independent of these relations in the main, although I believe that the earlier and lighter systemic changes which contribute to the gouty state, may predispose the entire organism even to local diseases, which the perfectly healthy may escape.

Turning now to the more immediate consideration of our subject, what are the elements which comprise the gouty state, which we are to seek for and recognize as of importance in connection with diseases of the skin? They may be classed under two heads, imperfect assimilation or nutrition, and im-

Thus, the most commonly recognized symptoms of dyspepsia, pain after eating, or the feeling of a heavy load in the stomach, heart-burn, nausea, acrid or fetid eructations of wind or liquid, are familiar to many, and may or may not be mentioned by the patient if they exist. But it is a mistake for the physician to suppose if these are absent that the patient has no indigestion; and it has been the failure to recognize this fact, and to search for deeper proof, which has led to the neglect of the internal pathology of diseases of the skin.

Imperfect digestion is shown quite as plainly by other elements as by those recognized by the laity as connected with it; and what I wish now particularly to direct attention to is the connection between many of these symptoms and functional derangements of the liver, as insisted so forcibly by Dr. Murchison.* I can not do better than to quote his list of symptoms of indigestion, as more commonly observed:

"1. A feeling of weight and fullness at the epigastrium, and in the region of the liver.

"2. Flatulent distension of the stomach and bowels.

"3. Heart-burn and acid eructations.

"4. A feeling of oppression and often of weariness and aching pains in the limbs, or of insurmountable sleepiness after meals.

"5. A furred tongue, which is often large and indented at the edges, and a clammy, bitter or metallic taste in the mouth, especially in the morning.

"6. Appetite often good; at other times anorexia and nausea.

"7. An excessive secretion of viscid mucus in the fauces and at the back of the nose.

"8. Constipation, the motions being scybalous, sometimes too dark, at others too light, or even clay-colored; occasionally attacks of diarrhœa, alternating with constipation, especially if the patient is intemperate in the use of alcohol.

* On Functional Derangements of the Liver. Croonian Lectures for 1874. London, 1874.

"9. In some patients attacks of palpitation of the heart, or irregularity or intermission of the pulse.

"10. In many patients occasional attacks of frontal headache.

"11. In many patients restlessness at night and bad dreams.

"12. In some patients attacks of vertigo or dimness of sight, often induced by particular articles of diet."

Other symptoms must be added to these, which are quite as definitely the result of imperfect digestion, or of the state of blood, called by Murchison *lithæmia;* many of them he subsequently mentions. Such are, the constant tendency to aphthous sores of the mouth and tongue, recurrent herpes labialis, also hemorrhoidal congestion, with external or internal piles and pruritus of the anus; a slow and sluggish pulse; chronic bronchitis and spasmodic asthma: these are all constantly seen to be entirely dependent upon the gouty state. Sleeplessness and restlessness at night are not at all infrequent indications of this state and of imperfect digestion. And here I can not do better than again to refer to Murchison, whose clinical observations in the admirable little book mentioned I have verified again and again, indeed daily in practice as well as in my own person. And I may remark that the book is written in the most fascinatingly truthful style, and shows the careful observer throughout, and in many instances gives the impression almost of a personal narrative. I know of no medical work of its size so instructive, and would urge all who desire to enter more into the details of the matter here presented, not only to refer to the book but to study and digest it; it will not produce mental or physical indigestion in the reader, as do so many modern writings, but if thoroughly masticated and assimilated will help many to benefit and cure the dyspepsia of others, and their own, if they have any.

In reference to this sleeplessness, Murchison recognizes that it may arise from many causes, but believes that "one of its causes is the derangement of the liver which produces lithæmia." Says he:—"When this is the case, the patient is often heavy and drowsy after a full meal, and he may fall

asleep at once on retiring to rest; but after one, two, three or four hours, he awakes and then he lies awake for hours, or he is constantly falling asleep, dreaming or having the nightmare and awaking—four or five times, or even oftener, in the course of one hour—until the morning comes, when he drops into a quiet sleep of an hour or more; or he is obliged to get up, tired and irritable. This sleeplessness like the vertigo . . . is often induced by particular articles of diet, or by some unwholesome combination of them. What will excite headache, giddiness, or disorders of the circulation in some patients, will in another cause sleeplessness. Sometimes, however, this symptom will occur when the patient is most careful as to diet. What is important also to note is, that in most of these cases there are no obvious symptoms of gastric dyspepsia; the appetite may be good, too good in fact; the bowels may be regular, and there may be no pain, flatulence, or other discomfort after meals; but there will be found an unusual tendency to the deposit of lithates in the urine, and very often other phenomena of a so-called gouty diathesis. . . . It is, however, a form of sleeplessness not generally understood, and harm is often done to patients suffering from it by the administration of opiates and other soporifics, from ignorance of its real cause. Very often the symptom will be greatly relieved, if not entirely removed, by careful attention to diet. . . . Some patients with this form of sleeplessness have told me," says Murchison, "that they never sleep so well as after a dose of calomel or blue pill."

The present writer has observed this form of sleeplessness very commonly in patients affected with diseases of the skin, especially among children, and far oftener in the latter than he had any reason to expect from previous teachings on the subject; and it was long before the true nature of the sleeplessness was discovered, and then mainly by the failure of local treatment to remove the skin difficulty, or to give sleep by affording relief to itching, where it existed.

But I have delayed far longer than was intended on this portion of the subject, and will briefly mention the other ele-

ments which must be looked for as indicative of the state, or of a tendency to its development in patients diseases of the skin.

Occurring spontaneously, or dependent more or less wrong action of other organs, the intestine may fail in its tion, either by deficient excretion into its cavity, or by ta and imperfect movements and delayed expulsion of its C tents; the former being costiveness and the latter consti tion. Of course there are many causes of this failure; m of it is primary, some is secondary to the gouty state alrea developed: its continuance is certainly productive of this ar many evils, and it is of vast importance to properly mana the functions of this great excretory organ, the extent C which importance is hardly sufficiently comprehended.

Far too little attention has been paid to the skin as an ex- cretory organ, and to its condition and circulation as indicative of the health of the economy, and to the maintenance of its proper action as an element of health. The general surface of the skin affords very clear indications of the beginning or existence of the gouty state. All are familiar with the sallow, unhealthy look during the existence of what is known as "biliousness," whose oft-repeated recurrence ends in chronic lithæmia; and also with the clear, translucent skin of those in whom the gouty state is so far advanced as to result in joint inflammation: the imperfect cutaneous circulation, manifested constantly by cold, clammy hands and feet, even in summer, is also recognized as resulting from digestive disturbance; and in the later stages of the gouty development we have the inactive skin, shown in a dry condition, seldom perspiring, with frequent sensations of chilliness and frequent "taking cold" on slight exposures. All these conditions I have daily recognized in patients suffering from many affections of the skin.

The clearest, and in some respects the most satisfactory, element in the establishment of the existence of the gouty state in patients with diseases of the skin, is furnished by the urine. It has been claimed by opponents to some of the views inculcated in this paper that nothing has been proven in

regard to any relations of the urine to diseases of the skin, because the changes found in the urine of patients with cutaneous affections are only those existing in others in whom there is no disease of the skin. This is not the time nor the place to enter into any discussion of the question, but I would simply ask of the objectors what changes could or should be expected in the urine? Certainly we would not expect to find any new elements, for the constituents of the urine are capable of undergoing but a comparatively few changes, and these occur pretty definitely under definite conditions. Now it is precisely this that I wish to establish in the matter, namely, that many of the diseases of the skin are associated with and measurably dependent on the presence of the gouty state, and the existence of that gouty state is demonstrated by the state of the urine in most if not in all cases. It is understood, of course, when I speak of changes in the urine, that I recognize them not as the result of kidney disease, but as indications of the blood state.

The changes which the urine undergoes in acute articular gout are well known and very definitely established: these are, the diminution of all the chief ingredients as the paroxysm approaches, the diminished quantity without proportionate increase in specific gravity during the inflammatory attack, and, as it passes off, the appearance of urates or lithates in the urine, generally in great abundance. In the minor or earlier period of the gouty state, the stage in which most of the cases of this class of diseases of the skin are observed (for they are not nearly as commonly met with as would be supposed in those who have gone so far as to have articular gout), in the earlier stages or phases of the gouty condition we have changes in the urine which foreshadow those which will follow if the same causes continue to work. Thus, early in indigestion we find oxalate of lime beginning to appear, with urates and occasionally uric acid, at first with each attack of functional derangement of the chylopoetic viscera: as these derangements become more frequent and oft-repeated, the changes are more and more common, until they become the estab-

We are now prepared to notice, for a moment, the three important points in reference to this study which were alluded to in the beginning: First, the importance of recognizing certain skin diseases to be the earlier signs of the gouty state, with a view of saving the patient from the worse and more dangerous manifestations. If diseases of the skin are recognized to be thus connected, it becomes the duty of the physician to look for the cause and remove it, quite as quickly as it is his duty to guard the patient who has had one attack of gout of the toe from its recurrence, and to endeavor to protect other organs from the influence of the poison: this is to be done by so altering the life and habits of the individual that the acid production ceases. Skin diseases of certain varieties are thus seen to be of much more importance in medical pathology than has sometimes been granted, or than some even to-day agree; and the physician's duty is not always ended when he prescribes a local remedy for every case of skin disease, simply for the purpose of giving relief to the immediate symptoms present. Quite as improper is the indiscriminate use of arsenic, just because the skin is affected, some of the errors in the use of which, as also some of the benefits resulting from its proper employment, I had the honor to lay before this learned body one year ago.* On the occasion of the occurrence, then, of the diseases of the skin which are recognized as connected more or less with the gouty state, it is the duty of the physician to go carefully over the entire case, to seek the elements of ill-health and to remedy them, not only because the skin affection is thus benefited, but because the signal-flag of danger thus placed in plain sight should not be disregarded.†

* On the Use and Value of Arsenic in Diseases of the Skin. Transactions of the American Medical Association, Vol. XXVII, p. 163. Reprinted. New York: D. Appleton and Co. 1876.

† It will be understood, of course, that I do not by this intend to support in the least the popular (and semi-professional) idea that there is any danger of "driving in" an eruption: such a thing is simply impossible, the educated physician of to-day does not hesitate to remove any eruption as soon as possible. I only claim that best interests demand a coincident attention to the general health.

But, Second, it is important to recognize the gouty state in certain diseases of the skin, because it is well nigh essential to do this in order to obtain permanent effects in treatment. This point I can not dwell on now; it will be developed more fully under the next subject, the management of the gouty state in skin diseases. It were possible, however, did space permit, to give very numerous examples where local treatment, of the most varied and approved character, failed to give any results until gouty elements were removed; also where iron, arsenic, cod-liver oil, etc., seemed but to aggravate the disease before attention was paid to the elements dwelt upon in this paper.

We come now to the third and most important portion of our subject, namely, the Management of the Gouty State in Diseases of the Skin. I have used the word "*management*" instead of treatment, because, as its elements of causation are manifold and extend into the habits of life of the patient, its removal requires something more than routine *treatment*, or the prescribing of this or that drug: it requires a thorough investigation of the errors of life and their rectification, as far as possible. The latter is accomplished first by diet, second by hygiene, and third by medicine, whose importance is in the order of their mentioning. First as regards diet.

By dieting is popularly understood a starvation process, which is to be continued for a short time, for the purpose (even if it is not avowed) of starving out the disease. Diet, as understood by the intelligent physician, is such a regulation of the quantity and quality of the nourishment taken, its mode of preparation, and manner and time of consuming, as shall conduce to the restoration to health of functionally or organically diseased organs, and to the maintenance of health: in this its broadest sense should it be considered in the management of the gouty state, especially as observed in connection with diseases of the skin.

First, then, as to quantity: It must be acknowledged that overeating is far more common among the better classes of society than under-eating, and a study of my recorded notes

of private patients shows continual proof of the fact: they frequently say, in answer to the question if they have dyspepsia, that they are not troubled unless they "eat too much." Clinical investigation will convince every one that much of the indigestion existing is very commonly the result of habitually taking just a little more nutriment than the system requires; and that extra amount is more commonly in the way of desserts, or griddle-cakes, or salad, etc., which tempt by their delicate flavor.

Few persons discriminate between appetite and taste, and because there is still a relish for sweets, etc., long after the healthy appetite has been satisfied, they indulge in them, and the digestive system is taxed far beyond its true capabilities. From this one of two errors must result, the lesser one when the stomach rejects the load, or passes it partly digested into the intestines, giving rise to a diarrhœa; or a worse result happens, when there is an attempt to assimilate the entire quantity, which ends in but a partial digestion of the whole, and as a consequence we have imperfectly altered substances circulating in the blood, which appear in the urine as oxalate of lime, urates, uric acid, etc., the early stage of the gouty state. As remarked, the first result of the rejection by the stomach or of an irritative diarrhœa, is the lesser of the two evils: tradition says that the Chinese take emetics to enable them to over-eat again, whereas gourmands among the more civilized nations think that the "dinner-pill" or a mineral water furnishes a more elegant method of avoiding the ill effects of their folly and crime. Hence, the entire quantity of the food must be properly regulated, and such elements as stimulate unnatural appetite must be avoided, as condiments, etc.: this is also one of the evils of the use of wines at meals.

But the entire quantity of food may be normal in amount, and some of its individual articles may be in excess or in default: this is most plainly seen in such diseases as scurvy and rickets, but is equally true in regard to other states. One patient indulges very largely in saccharine and starchy food, another takes meat in excess, a third, especially among the

strumous, takes little or no fat: to the proper management of the gouty state these matters of diet require to be regulated by the physician, for man is so influenced by surroundings that instinct has little to do even with the more animal portions of his economy. We have not the time to enter further into the matter of diet in this place, but can only throw out the warning that unless it is studied by the physician to whom the patient with functional derangements which will result in the gouty state has applied, in many cases he will not be able to cure the skin disease, and will fail of his duty in regard to the future health of his patient.

One further point somewhat in this connection must be mentioned, and that is the proper mastication of the food. The process of digestion undoubtedly commences in the mouth, and an imperfect performance of the work allotted to this portion of the digestive tract must throw extra work on other portions, and result in imperfect digestion. I find that many of these patients eat very hastily and chew their food very imperfectly. I may also mention the use of very cold liquids during eating, and also the use of much fluid of any kind, as prejudicial to the proper performance of the digestive functions. Many unconsciously take large draughts of water, tea, beer, etc., while eating or soon after, to the detriment of their digestion, and perceive the benefit following a diminishing of the amount. I usually advise those exhibiting elements of the gouty state to take not more than one-half of the accustomed amount of fluid during or near the meal, making up the deficiency, if more liquids are craved, with water in the intervals between eating, not sooner than half an hour before or two hours after the meal. I have for several years advised copious draughts of ordinary water on rising and on retiring, in the gouty state, and am pleased to find that the same has been practiced by so high an authority as Sir James Paget, of London, as recently mentioned by him in print. Soup at meals I hold to be, in many instances, a great error of diet.

In regard to the use of wine, ale, alcohol, etc., in the early or late stages of the gouty state, as seen in patients with skin

diseases, they are to be interdicted even to the severest degree, it being indeed impossible to overcome the acid production, in many instances, when they are indulged in: there are exceptions, of course, to this as to every rule. The degree of their harmfulness, I believe, may be expressed by the order in which they stand in the following list, the most injurious coming first: porter, ale, madeira, port and sherry wines, champagne, cider, lager beer, claret, hock, and the very light white wines, brandy and whisky. Thus, it is not the alcohol which is harmful as much as it is the sweet, fermentable and fermenting principle contained in wines, beer, etc. If stimulants are really required, I prefer to supply the need by the bitter infusions or tinctures, or quinia.

In conclusion of the subject of the diet in these cases, I would affirm that the person with a gouty state, even in its earliest developing stage, should regulate the diet to such a degree that but little if any medicine is required, except as an occasional adjuvant, when unusual and unpreventable causes operate to cause special derangement in the functions of the organs. Food should be taken, if necessary, more often than common, in order to prevent overloading the stomach beyond easy digestion at any one time. All articles of known difficulty of digestion should be sedulously avoided, such as nuts, cheese, pickles, pastries, fried articles (of which fried oysters and egg-plant are the type of what is evil), gravies, sauces, hot bread, cakes, etc., together with such fruits as bananas, pine-apples, cocoa-nuts, also such vegetables as sweet potatoes, cabbage, etc. Finally, there is no field which should receive so much attention from the physician, and yet which does receive so little, as the matter of the selection and preparation of the food and drink which form the frames which we try, so often vainly, to influence beneficially by medicines. I trust that those who may become interested in this subject, in connection with skin diseases, will look it up elsewhere and study it clinically.

But of almost, if not quite equal, importance in the management of the gouty state in diseases of the skin, is the mat-

ter of hygiene: under hygiene I include exercise, bathing, sleep, occupation, light, air, etc.

The majority of those affected by the gouty state are of more or less sedentary habits, and there is hardly any point which will be so hard to manage as the matter of exercise in these patients. Simply to advise them to "take plenty of exercise in the open air" will not suffice, for the judgment of the patient may differ materially from that of the physician as to what is implied thereby; the subject must be seen to and followed out if any results are to be obtained.

It was stated before that inactivity of the skin was an important element in the gouty state of skin patients, and to remedy it will often require considerable attention. Cold sponge bathing and sharp friction after it, every morning, is a very valuable aid in this. Dr. Todd recommends the addition of nitro-muriatic acid to the sponge bath. Turkish baths very often assist greatly, and are of advantage, once a week or so. I have also seen very excellent results in skin diseases which even were quite local in character, in those of gouty habit, from the use of full, long, warm baths, rendered moderately alkaline, say by the addition of carbonate of potash, carbonate of soda and powdered borax together, three, two and one ounces of each respectively, in a thirty gallon bath, at a temperature of from 85° to 92° Fahr. This may be taken two or three times a week, on retiring, remaining in the water from fifteen to thirty minutes.

The sleep, hours of retiring, etc., as also the apartment, should be attended to; likewise such matters as the light and air enjoyed by the patient, and also his occupation, should not escape the physician's attention.

All these matters may seem of trifling importance, and not worthy the regard of educated men, but I believe that in treating chronic diseases we must look to chronic causes, and nothing which can conduce to the health or ill health of the patient should be neglected by his medical adviser. We all know of the importance of these items in cases where the tuberculous habit has been acquired or inherited, and in these

instances attention to them is often of the greatest benefit to the patient. I hold that the gouty state may develop conditions equally dangerous, certainly to the future health, vigor, and usefulness of the patient, and that these points should be equally attended to in this state.

Having now considered the two most important elements in the management of the gouty state in diseases of the skin, namely, diet and hygiene, we can very briefly complete this study by a mention of the drugs which may be relied on to assist in the work. Functional derangement of the abdominal organs, causing faulty assimilation and disintegration, was mentioned at the outset as being the foundation of the gouty state, and to relieve the condition we must reach them with appropriate medication. There can be little or no doubt but that the views so ably put forth and sustained by Murchison, in regard to the very important part which functional derangements of the liver play in the production of the gouty state are the correct ones, although in the excellent little work alluded to perhaps prominence is given to it to the undue neglect of the part played by the other organs engaged — the stomach, pancreas, intestines, etc.

Unquestionably the proper use of the right cathartics is of great service in the treatment of the gouty state, and foremost among these stands mercury. The old remedy of five grains of blue mass, five of the compound extract of colocynth, and one of ipecac, given in two pills, and repeated on the second night, is one of the very best agents we have to give relief to the portal circulation. I not uncommonly allow this dose to be repeated on the following week, and when the gouty state is pretty fully established, the course may be taken at weekly intervals or longer. A very common and valuable remedy of mine for the more permanent relief of the constipated habit, is the use of pills of the extract of aloes with a little dried sulphate of iron, with or without the extract of nux vomica. These are to be taken *regularly*, directly after the meals, at first thrice, then twice, then once daily, and ultimately patients who before have been habitually constipated have been able

to reduce the number to one taken *regularly* at stated intervals, of several days or a week, or to discontinue them. There are, of course, very many valuable methods and ways of overcoming constipation, which can not be mentioned here; of the value of the two preparations just referred to the writer can speak from large experience in their use.

Next to overcoming constipation, the primary digestion demands most careful attention in the management of the gouty state in diseases of the skin. Want of space forbids more than the briefest notice of this subject; the remedies suitable to relieve digestive disorders are too numerous even to mention. I will, however, call attention to lactopeptine, which, taken repeatedly after each meal, is often of the greatest service in assisting proper diet in this matter; sometimes the mineral acids and sometimes the alkalies are of value, according to the requirements of the case, which can not here be dwelt upon.

As before mentioned, the urine affords the most serviceable means in our possession of discovering the existence and watching the progress of development of, or the disappearance of, the gouty state, and the constant and repeated examination of it should never be neglected. The skill and care necessary for this are attainable by all, and the apparatus is not expensive; for the details I must, of course, refer the reader to one of the many good books on the subject. I find that patients are willing to pay for the extra time and work necessary, when made aware of the importance of this matter.

Watching, then, the quantity of urine passed, its specific gravity and acidity, the presence or absence of deposits, the occurrence of albumen and sugar, or the phosphates thrown down by heat and dissolved by nitric acid, and, microscopically, the oxalate of lime, the urates and uric acid, we can determine with a very certain amount of definiteness whether the gouty state is on the increase or decrease, or at a standstill, and can vary our medication, diet, etc., accordingly.

The remedy which I use more than any other in overcoming the acidity of the gouty state in diseases of the skin is acetate

of potassa, given pretty freely, from fifteen to thirty grains three or four times daily, generally on an empty stomach and well diluted. When there is more primary indigestion and stomach acidity, I order it to be taken after eating and with less water, say a wine-glass or so, in a bitter infusion, as of quassia or columbo. A very valuable method of accomplishing the same is by the frequent use of Kissingen water, or Kissingen and Vichy mixed. I give the former, drawn from a syphon bottle, three, four or more times daily, in small quantities, a quarter to half a gobletful at once, on an empty stomach; that is, not sooner than half an hour before or two hours after a meal. I prefer the mineral waters manufactured in this country, especially those of Dr. Hanbury Smith, of New York, and use far more Kissingen than Vichy. Lithia, in its various combinations, is a most excellent remedy for meeting the gouty state, and one which I very frequently employ. I have commonly used the benzoate, although the carbonate and citrate are very good; it should always be given after eating. The salts of soda are far inferior to other alkalies in overcoming the gouty state, although they afford much temporary relief to pressing symptoms; magnesia I use more or less, as particular cases require.

I have thought that acetate of ammonia has served me much good purpose in many cases of the gouty state in diseases of the skin, on account of its action on the cutaneous surface. Certainly skins, which before were dry and harsh, and perspired little if any, became soft and moist under the use of the acetate of potash dissolved in the liquor ammoniæ acetatis, the mixture being given three or four times a day: this is of special service in infants and children. Jaborandi promises to be of service in meeting and overcoming the inaction of the skin in the state under consideration.

Iron is an oxidizer, and when it is well borne by persons in a gouty state it aids assimilation and improves the tone of the system; but very frequently it can not be taken with advantage by these persons, except alternated or combined with

alkalies or aperients.* The muriated tincture of iron is one of the most serviceable forms in which to give it; when it is desired to administer alkalies with iron, the ammonia-citrate is about the best preparation to employ. Arsenic is also a promoter of the assimilative process, but must be given with even more caution than iron to persons in a gouty state, and patients taking it must be watched, especially with reference to the condition of the urinary secretion: when this is faulty, arsenic will be pretty certain to do no good, or to do positive harm. I like very well the acid De Valangin's solution, which I frequently give alone or in combination with the muriated tincture of iron. But this is a powerful remedy, and in one instance its use induced a gouty attack in a lady predisposed to many of the manifestations of the gouty state, and when this attack passed off a return to the remedy was followed immediately by another aggravation of the gout.

The management of the gouty state, as observed in certain diseases of the skin, may be summed up somewhat as follows: In the early stages of the systemic changes recognized as tending to the production of the gout, more is to be expected from diet and hygiene, exercise, bathing, friction to the skin, etc., with the occasional use of the milder alkalies and laxatives, such as mineral water, judiciously used. In the later stages, where the more commonly known manifestations of gout have already developed, and where the acid blood state is fully formed, the management must embrace the measures serviceable in ordinary gout, including diet, hygiene and medicine, if sure or permanent relief is expected to the disease of the skin, which is one of its manifestations.

I have said nothing in reference to colchicum in this connection, because I have had no very great personal experience to offer in regard to it. I have thought that I have seen considerable benefit from it in certain cases of chronic urticaria

*Since the above was written and read, an excellent paper by Dr. Fothergill, on "When not to give Iron," has appeared in the London Practitioner, September, 1877, p. 183; and I am pleased to see that this bright observer gives the same cautions, but expressed much more fully. I would refer the reader to that paper for a full consideration of the subject.

with acidity; but, on the other hand, my impression has been unfavorable in reference to it in some other affections of the skin, where it has been prescribed by practitioners who have seen the case before me: of its reputation in well developed arthritic gout, we are all well aware. I have also omitted mention of other methods, measures and remedies which have been recommended in the gouty habit, as I desire here simply to give practical expression to my experience clinically in managing this state in diseases of the skin.

I would like to have been able to add something definite in regard to the effect of climate in the development and cure of gouty skin diseases, but refrain from speaking on the subject until more data have accumulated, hoping however that others may be able to add experience on this subject. I am satisfied that certain affections of the skin depend largely on climatic influence, and believe that much of the benefit in them derived from a residence at mineral springs, etc., is due to the change of climate and surroundings, affecting favorably the gouty state, which is the foundation of many diseases of the skin.

ing nerves; *c*, eruptions accompanying brain and spinal disease; *d*, idiopathic nerve-lesions found *post mortem* in nerves supplying diseased skin.

4. Résumé and deductions.

1. Let us first, then, look at the anatomical grounds for supposing a dependence of any skin-diseases on nerve-influence. The richness of the nerve-supply of the skin can be best appreciated by remembering the acute sensibility possessed by every part of the integument, so evenly and perfectly distributed that the finest cambric needle, or the infinitely smaller and far more acuminate sting of an insect, can be nowhere introduced without causing a sensation of pain. This abundant innervation is derived from the plexus of nerves ramifying in the papillary layer, corresponding to the capillary network, and consisting "partly of coarse fibres and also of others fine, smooth, and varicose, with numerous nuclei. From this plexus single nerve-fibres ascend toward the rete mucosum, which sometimes run first for a distance beneath it, and then, turning suddenly, enter the mucous layer. Others reach the papillæ, subdivide within it, and mount between the cells of the rete Malpighii. In favorable specimens the nerve-fibres are readily seen entering the mucous layer and ending there in knob-like distentions, at the height perhaps of the third row of cells. Also, in the more external layers of the rete, Langerhans asserts that he has seen a number of bodies, stained violet in chloride of gold, each of which sends a prolongation downwards and several outwards toward the horny layer. He thinks the former are connected with the deeper nerve-fibres."* This distribution of the terminal portions of the nerves among the cells of the rete has been verified by Podcapaëw † and Eberth‡; and Dr. Palladino§ has traced non-medullated nerve-fibres running into the deep epithelial layers of the lip of the horse, where they terminate by free extremities; and finally, Colasanti‖ has followed them among the epithelial cells lining

* Stricker's Manual of Histology. New-York, 1872, p. 552.

† Schultz's Archiv, v. 4, 1869.

‡ Arch. für mikroskop. Anat., 1870, vi. 2.

§ Lancet, March, 1874.

‖ Lancet (Am. ed.), Jan., 1874, p. 45.

the sebaceous glands. Cohnheim and others have seen the termini of nerves between the epithelial cells of the cornea; Elin, Boldyrew, and others in the mucous membrane of the palate, larynx, vagina, and elsewhere.*

Besides these non-medullated fibres we have those which are medullated, which end in the Pacinian corpuscles and those of Meissner, the former of which appear to be the organs of the special sense of touch, as they are most abundantly developed in those parts possessing most of tactile sensibility, namely, the palms and soles, especially on the last phalanx of the fingers. Langerhans has recently,† by means of osmic acid preparations, declared these tactile corpuscles to be made up of a great number of single cells, which are characterized by the delicacy and small amount of their cell-substance, while the nerve-elements are distributed among them in all parts of the organ. Also, that the peripheral cells are everywhere in contact with the surrounding tissue, and that the corpuscle can not, therefore, be regarded as surrounded by any distinct limiting membrane.

The bearing of these histological observations on our present study is as follows: Much, if not all, of the nerve-influence in skin-diseases has been often supposed to depend simply upon the *capillary changes* induced by vaso-motor nerve-action or want of action, namely, hyperæmia and anæmia,‡ whereas the intimate connection we have mentioned as existing between the cells of the papillary layer, rete, and epidermis, and the termini of the nerves among and within their cells, would point clearly to some influence exerted directly on the former by the latter, and this the normal development in health, and the neuropathic changes in disease. This we emphasize as the ground and foundation of much that is to come hereafter, namely, that this very intimate association of the terminations of the nerves with the cells composing the skin, would seem to

* Henle, Handb. des system. Anat. des Mensch., 2d edit., 1873. Bd. II., Lief. I., p. 18.

† Max Schultz's Arch., 1873, p. 730. Archives of Dermatology, Oct., 1874, p. 61.

‡ J. S. Jewell: The Chicago Journal of Nervous and Mental Disease, Oct., 1874, p. 426.

indicate that they, the cells, were under direct nervous control, possessing self-existent powers, capable, under proper nerve-stimulation, of absorbing just enough nutriment to maintain their proper relations, while under perverted control they, the cells, take on morbid action. In giving prominence to this method of nerve-influence we by no means deny the very important part taken by the vaso-motor nerves as well, which is evident in the erythematous redness forming a large element of many skin affections, which capillary disturbance is likewise seen experimentally in the production of artificial eczema. But, as we shall see hereafter, simple vaso-motor derangement alone is insufficient to produce the pathological changes found in many diseases of the skin.

Tomsa* has further shown that, within the papillæ, the nerves form a network, with nuclear developments, part of which network is applied directly to the capillary loop.

2. Having found now, in the enormous nerve-supply, extending even among the individual cells of the skin, anatomical reasons for the just expectation that the nerves have much to do with normal and abnormal cutaneous cell-action, we come to consider the physiological grounds of the same. Dr. Mitchell, in his well-known admirable work,† has entered quite fully into this subject, and we shall have occasion to make use of his researches, as we shall, later on, refer to his wonderfully well elaborated pathological considerations and cases. The recent work ‡ of our talented friend, Dr. Oscar Simon of Berlin, on the localization of skin-diseases, we shall also lay under heavy contribution, referring likewise to that of S. Samuel, on the trophic nerves.§

Our physiological inquiries will be presented under the following heads: 1. The mode of production of these lesions through nerve-influence, whether (*a*) by the vaso-motor nerves, that is, through the influence of contraction and dilatation of blood-vessels, or (*b*) by the action of special trophic

* Archiv für Dermatol. und Syph., 1873, I. Heft, p. 55.

† Injuries of the Nerves and their Consequences. Philadelphia, 1872.

‡ Die Localization der Hautkrankheiten. Berlin, 1873.

§ Die trophischen Nerven. Leipzig, 1860.

nerves. 2. The results of experimental section and irritation of nerves. 3. Arguments drawn from the regional distribution of nerves, and the corresponding cutaneous appearances. 4. Reflex nerve-influence.

The physiological arguments against a sole vaso-motor origin of the lesions observed in the skin are great. Speaking with reference to this subject, Mitchell * says, "If the vaso-motor nerves were alone responsible for the existence of all the lesions which follow nerve-wounds, it would be reasonable to expect always to meet with some rise or fall in temperature. Such, however, is not the case, and I have frequently met with profound trophic changes unattended by thermal perturbations, and the same remark has been made by other neuro-pathologists;" and he is unwilling to admit that vaso-motor nerve-lesions have any other share in the production of the tissue-changes which may follow nerve-wounds than merely to prepare the ground for their production by other more direct agencies. Complete section of the nerves produces but little nutritive change in the parts supplied, and Brown-Séquard remarks† that "it is certainly true, as maintained by Virchow, that nutrition and secretion, normal and abnormal, can be carried on without the intervention of the nervous system; but this does not at all prove that that system can not interfere, for good or for evil, in nutrition and secretion in the various tissues and organs." Mitchell has watched many cases where a limb or part of a limb was completely separated from neural influence, and failed to see any inevitable consequence except general atrophy, with usually muscular contractions, and a sallow, unhealthy look of the skin, which is apt to become scaly and rough. The nails grow as usual, perhaps a little more slowly, and the hair is commonly unchanged. We will see hereafter the striking contrasts following a perversion of nerve-influence resulting from injury and disease.

Experiments on the sympathetic have likewise failed to produce any true lesions of the integument. Section of these nerves causes a dilatation of the vessels by paralysis, and galvanization

* Loc. cit., p. 34.

† Lectures on the Diag. and Treat. of Functional Nervous Affections. 1868, p. 21.

contracts them. Weber and Mitchell have attempted to bring about trophic changes in the face by irritating and partially wounding the sympathetic, but the efforts have uniformly failed, "nor have like experiments, such as Lister's, upon the sympathetic nerves in the limbs of the frog, been any more fortunate."*

While experimental physiology demonstrates that the mere withdrawal of nerve-influence is not followed by the changes of disease, pathology abundantly proves, as we shall see later, that *nerve-irritation* is followed closely by such, and herein is the reason why these lesions are not produced artificially, namely, because the necessary and continued excitation is not practiced, as has been noticed by Charcot,† Vulpian, Couyba,‡ and others.

But the nerve-relations of skin-diseases, as observed in the regional distribution of certain cutaneous lesions, are at the same time interesting and instructive.

The simplest form of change in the skin dependent on nerve-influence is sudden alteration in color of the face, from the flushing of excitement, shame, or passion, to the blanching of fright. And these same changes, unquestionably dependent upon relaxation and contraction of the capillaries in obedience to vaso-motor influence, are observed to follow, in a reflex manner, upon stomach and intestinal action—flushing after eating, and pallor attending nausea or great pain, being pathological states due to the influence of the great sympathetic ganglia near these viscera. We have also certain of the glandular structures affected on these and similar occasions, as the tears and saliva in mental disturbance, and the cold sweat of fear and anxiety; but whether these are dependent directly upon nerve-influence, or are secondary to the capillary action, can not be stated. Another form of transient alteration of the skin occasioned by nerve-stimulation is the *cutis anserina*, where the skin becomes roughened by a sudden contraction of the minute

* Injuries of the Nerves. Phila., 1872, p. 32.

† Mouvement Médical. 1870.

‡ Des troubles trophiques consécutifs aux lésions traumatiques de la moelle et des nerfs. Paris, 1871.

muscles attached to the hairs, in response to the action of cold, and also from mental disturbances.*

Akin to these are the pathological states of erythema and local sweating, which have been observed to occupy the tracks of certain nerves; the former, erythema, having been observed principally in connection with injuries of nerves, will be spoken of more fully hereafter. We will here notice some of the facts connected with local sweating. Débrousse-Latour † gives the following as observed by Ollivier: A man, aged 76, had had zona with rebellious neuralgia for a year, which occupied the sixth, seventh, eighth, and ninth intercostal spaces of the left side. The right side was affected with a local hyperidrosis while the left remained perfectly dry, the secretion being worse when the pain was most severe. Notta ‡ noticed unilateral sweating in a considerable number of cases of trigeminal neuralgia, and decided unilateral redness of the face in eight out of one hundred and twenty-eight instances of the disease. Local sweating following nerve-injury will be mentioned later.

Nor do the phenomena of general excessive sweating point any less to the nervous system. Wilson § mentions having seen a number of severe cases where a profuse perspiration was preceded by a feeling of faintness and oppression at the epigastrium. Hanfield Jones ‖ regards the profuse sweating during sleep in phthisical, rachitic, and other invalids as resulting from a vaso-motor paresis due to debility.

The sensations of itching, burning, and pain accompanying eruptions, as also the states of hyperæsthesia and anæsthesia, are all nervous. Certain affections of the skin are confined entirely in their primary character to these manifestations of nerve-suffering, until scratching develops an artificial disease; thus, pruritus of the genitals, the general pruritus of pregnancy, and also the pruritus hiemalis, which Dr. Duhring has recently so fully described,¶ attacking generally the thighs, but-

* Simon: Die Localization, etc. Berlin, 1873.
† Des Sueurs locales. Paris, 1873, p. 30.
‡ Archives Générales de Médécine. 1854.
§ Diseases of the Skin. London, 1867, p. 810.
‖ Journal of Cutan. Med. Vol. ii., 1868, p. 130.
¶ Phil. Med. Times, Jan. 10, 1874.

tocks, and legs, also less commonly the arms and trunk, all appear to be true neuroses, unconnected primarily with any structural lesion in the skin.

More striking is the symptom of pain, or neuralgia in connection with skin-lesions, and most prominent is that associated with the various forms of herpetic disease, the zona or herpes zoster. For the completeness of our subject, we will rapidly review some of the features of the idiopathic form, which will at once meet with verification in the practice of every physician. The pain preceding, accompanying, or following an attack of herpes, is of a peculiarly piercing, boring, lancinating character, marking a true neuralgia, confined to the track of nerves, or to certain *points douloureux*, or tender spots, pointing very clearly to neurotic relations of the disease. Further, as is well known, the vesicles are developed very definitely along nerve-tracks, the exceptions to the same going only to prove the rule. This is true of zona, wherever developed—on the head following the course of the trigeminal, and on the arms, chest, loins, thighs, or elsewhere, it has the same general characters, wherein can be traced nerve-distribution.

Besides the pain, other symptoms pointing to the nervous system have been observed; thus, Duncan* records partial hemiplegia, accompanying an idiopathic zona in two remarkable cases, both in old ladies, one aged 65 and the other 68, in the fourth right intercostal space in the former, and on the left thigh in the latter. In both instances the paralysis disappeared in a short time, three weeks and ten days respectively, when the herpetic eruption dried up. Cases of ophthalmic herpes are also reported by Vernon† and Greenough,‡ where there was paralysis of the facial nerve. Broadbent § gives a case where a right brachial herpes, preceded by severe burning pain, was accompanied by almost complete paralysis of the same arm. Not infrequently after zoster, there is left a considerable anæsthesia of the affected parts, and the obstinate ulcerations

* Journal of Cutaneous Medicine, vol. ii., p. 241.

† St. Barthol. Hosp. Reports, iv., 1868.

‡ Bost. Med and Surg. Jour., No. 28, 1869.

§ Brit. Medical Jour., Oct. 27, 1866; Jour. Cut. Med., vol. i., p. 283.

after certain cases are, in fact, necroses of the skin due to defective innervation.

Dr. Anstie* has seen a unilateral affection, undistinguishable from ordinary erysipelas, follow a neuralgia of the fifth pair, and limited to the painful parts. Dr. Russel† records the case of a female, aged 23, who was subject to attacks of pemphigus, each attack being preceded for a time, varying from a few minutes to an hour, by itching with fearful pain, strictly limited to the particular spot to be affected. She was also, from the first appearance of this difficulty, liable to very severe and troublesome inodorous perspiration. Dr. Woakes,‡ in an excellent article on Neurotic Exanthema, quotes a number of other idiopathic eruptions evidently connected with nerve-influence, which we will briefly allude to. A case of neuralgia of the leg, associated with superficial ulcers, was successfully treated by division of the popliteal nerve, after which the pain ceased and the ulcers healed.

Two cases of shingles affecting the arm, reported by Mr. Paget,§ are referred to, in which neuralgia continued after the attack, and with it the fingers exhibited in a well-marked degree the features so often seen after an injury of a nerve; that is to say, they became thin and tapering, smooth, hairless, glossy, pink and blotched, as if with permanent chilblains. The same author, Mr. Paget, is quoted in a case of neuralgia of the right side of the face, where an herpetic eruption coincided with the surface distribution of the infra-orbital, anterior dental, and anterior palatine branches of the right superior maxillary nerve; the eruption extending to the right half of the roof of the mouth and adjacent parts of gum and cheek. Necrosis of the alveolar portion of the jaw succeeded, the teeth of which fell out, and ultimately the bone itself came away.

This subject is further abundantly illustrated by Anstie, Mitchell, Mougeot, and others, but time forbids further reference here.

Not less striking are the nerve-indications associated with

* Reynolds' System of Medicine, vol. ii., p. 737.

† Med. Times and Gazette, Oct. 29, 1864; Jour. Cut. Med., vol. ii., p. 129.

‡ Jour. Cut. Med., vol. i., p. 283.

§ Med. Times and Gazette, Mar. 26, 1864; Jour. Cut. Med., vol. i., p. 282.

Elephantiasis Græcorum, or, more properly, *lepra anæsthetica*. Here the first symptoms may be entirely neurotic, before the appearance of any cutaneous lesion, as observed by many. In a case which recently fell under our notice, the first annoyance was the feeling as if a hair was lying across the right cheek, which the patient would repeatedly try to brush off, there being at about the same time a reddish streak, which died away, but afterwards returned and spread, covering much of the face. Coincident with the development of the macular form of the disease on the legs and arms, the patient noticed a very considerable hyperæsthesia of the whole body, so that the slightest touch was painful, and a moderate knock caused suffering. This, when first seen, was being replaced by an anæsthesia, commencing as a dead feeling in the right thumb and forefinger, and on the back of the left hand. During the month previous he had had pains in the legs, also aching and shooting pain in the right forefinger. As is well known, in the true anæsthetic form so great has become the nerve-lesion at times, that absolutely no pain is felt in the spontaneous amputation of the joints which occurs, as we ourselves had also opportunity of observing in a severe case in the New-York Hospital, where the ankle became diseased, abscesses formed and were opened, the joint freely probed, and finally the limb amputated with the knife, absolutely without pain. The lesions found in the nerves in this disease will be mentioned later.

Closely resembling this in some respects are the *morphœa*, described so fully by Wilson, and further, *scleroderma*, with their anæsthetic patches, and also *alopœcia areata*, which has been considered by some as a neurosis, while others* have even traced nerve-influence in ordinary *alopœcia*, situated, as it commonly is, on the surface of distribution of the supra-orbital nerves.

Another disease, for which nerve-relations are claimed on physiological grounds, is *Nævus*. Bärensprung† was the first to suggest nerve-influence in this disease, from a resemblance in the distribution of certain nævi to that of zoster. Theodore

* Simon: Die Localization der Hautkrankheiten. Berlin, 1873, p. 85.

† Nævus unius lateris. Charité-Annalen, 1863, xi. Heft II., p. 91.

Simon* has further reported on the subject, with the title *nerve-nævi*, a number of cases where these patches followed cutaneous nerve-distribution so closely as to point to a connection between them, and Oscar Simon† adds four cases even more conclusive. This latter author, however, truly says that many cases are observed where no such localization can be made out; the relations of these must await further clinical and pathological research.

Finally, Paget‡ mentions the fact that a lady, who was subject to attacks of what are called nervous headaches, always found in the morning after such an one, that some patches of her hair were white, as if powdered with starch. The change was effected in a night, and in a few days after the hairs gradually regained their dark-brownish color. This he considered a nervous phenomenon. The late Dr. Anstie noticed in his own person a turning gray of the hairs in the course of a neuralgic nerve§—a not very uncommon observation.

Other states pointing to the influence of the nerve-supply of the skin are those where a reflex irritation apparently gives rise to cutaneous lesion, or inversely where a cutaneous lesion produces internal disorder. Thus, in a paper‖ before the New-York Academy of Medicine last year, we endeavored to demonstrate the very intimate relations existing between the skin and the genital organs, and that especially in regard to uterine disorders and the pregnant uterus. As instances of this, the changes in the skin and hairs at puberty were noted, and the disorders of the former, in the chlorotic pallor, clammy hands, etc., attendant upon arrest of sexual development. Further, *physiologically*, the darkening of the areolæ of the breasts, and the enlargement of the follicles thereon was mentioned, and the dark line on the abdomen extending from the pubis to the umbilicus, together with the umbilical areola during gestation; and *pathologically*, the well-known chloasmic patches, especially

* Ueber Nerven-nævi. Archiv für Dermatol. u. Syphilis, 1872, i., p. 24.
† Die Localization der Hautkrankheiten. Berlin, 1873, p. 89.
‡ Lectures on Surgical Pathology. Phila., 1854, p. 44.
§ Reynolds' System of Med., vol. ii., p. 737.
‖ Am. Jour. of Obstetrics and Diseases of Women and Children, Feb., 1874.

on the forehead of pregnant females, and the bronzing of a large portion of the surface, as observed by some. Certain sympathetic nervous affections also attend this state, as facial neuralgia, cephalalgia, chorea, palpitation of the heart, and anomalies of sight, hearing, and sensation, one of the most marked sensory phenomena being the pruritus occurring repeatedly in some subjects, local or general, in either case giving great distress. Meigs says that 90 per cent of the cases of pruritus vulvæ he has met with were in women *enceinte*. General pruritus of the pregnant is a remarkable instance of reflex nerve-irritation, for, however severe, it vanishes at once upon parturition. It has been so severe as to cause premature labor; we have seen it so intense as to render a night's rest impossible, and upon its subsidence, in one case, a nervous hoarseness occurred, which had likewise appeared during a previous pregnancy, lasted to delivery, and disappeared spontaneously thereafter.

More interesting, however, were the cases of vesicular disease, evidently of reflex origin, to which we called the attention of the Academy under the name Herpes Gestationis, one case of which was presented and eight others quoted in brief, the only cases at all similar we had been able to find recorded. The eruption in question is papulo-vesicular, covering a greater or less portion of the body, accompanied with intolerable itching before the appearance of any lesion on the skin, and in most of the instances was repeated at each successive pregnancy. It is wont to appear at the third, fifth, or seventh month of gestation, and, as a rule, continues to the end, when it ceases suddenly upon the emptying of the uterus, frequently, however, with slight outbreaks while the uterus is undergoing involution. The analysis of these cases and analogy led us to conclude that the skin-lesion, the herpetic vesicle, or the aborted papule, was the direct result of a reflex action transmitted from the impregnated womb, whose nerves are known, on the authority of W. Hunter, Tiedmann, Stricker,* and others, to be increased in number and size when in this state.

Other forms of skin-lesion have also been observed and noted as probably dependent on the gravid uterus, and reflex in cha-

* A Manual of Histology. New-York, 1872, p. 616.

racter; thus Hebra* has recorded an impetigo, McCall Anderson † quotes Hebra as to the frequency of the occurrence of eczema during pregnancy, and the observation is common with some others. We ourselves have observed acne rosacea developed around the mouth and chin with each pregnancy, also psoriasis, which becomes worse during every gestation.

Burns afford a striking illustration of the reflex connections of the skin, though in an inverse manner. All know the great shock attending them, as well as the subsequent tendency to visceral congestion or intestinal ulceration.‡

Eulenberg and Landois § have endeavored to connect many of the lesions of the skin with nerve-causation, reflex in character, as urticaria, erythema, acne rosacea, and others, and Camille Misset ‖ argues quite strongly for the nerve-origin of acne rosacea. Finally, in many of the general eruptive diseases, there is quite distinctly traceable a certain disposition of the eruption in the course of surface-distribution of the cutaneous nerves.

We may, in conclusion of this part of the subject, again revert to a most interesting case which we have already mentioned in print.¶ A lady, aged 32, of intensely nervous temperament, the subject of a general paralysis twelve years ago, for the last two years has suffered, off and on, from a most excruciating lichenous eruption on the right shoulder and arm, running down on the wrist. She is a literary lady, accustomed to very great over-work, writing, etc., and whenever exhaustion is reached the pruritus returns, with the development of the papular eruption along the track of the nerves. Rest to the affected arm—that is, abstinence from writing—will cause it to disappear with treatment, whereas it has proved most rebellious while the over-strain was kept up. Of late the applica-

* Wiener Med. Wochenschr., No. 48, 1872.

† A Practical Treatise on Eczema. London, 1874, p. 59.

‡ Brown-Séquard: Physiology and Pathology of the Central Nervous System. Philadelphia, 1860, p. 161.

§ Angioneurosen. Wiener Med. Wochenschr., 1867–68, and Prag. Vierteljahrbuch, i., 1868.

‖ Etude sur la Pathologie des Glandes Sébacées. Paris, 1872, p. 19.

¶ Archives of Scientific and Practical Medicine. Brown-Séquard, Feb., 1873, p. 127.

tion of electricity has given very great, if not perfect, relief, it being applied by my friend Dr. Beard exclusively on the plan of central galvanization, no local applications being made.

3. We come now to the third, and, for direct proof of nerve-relations of skin-lesions, the most important part of our subject, namely, *pathological observations*, which, as before stated, will be subdivided as follows: *a.* Eruptions directly consequent upon peripheral wounds of nerves; *b.* Eruptions attending lesions of conducting nerves; *c.* Eruptions accompanying brain and spinal disease; *d.* Idiopathic nerve-lesions found *post mortem* in nerves supplying diseased skin.

The number of individual observations illustrating this portion which have been already recorded is now far too great for us to even briefly allude to them all here. We will, however, give certain cases as illustrative, and mention in general the results and opinions arrived at by different observers. For a fuller presentation of the subject, we must refer to the well-known work of Dr. Mitchell on "Injuries of Nerves," and to the able theses of Mougeot,* Couyba,† and Hybord.‡

a. Eruptions directly consequent upon peripheral nerve-wounds. The recorded instances of this form of lesion are comparatively few in number, but sufficient to show the existence of cutaneous lesions from this cause.

One of the most striking has been recently published by Dr. Mitchell,§ and is in brief as follows: A lady, when a child, two and a half years of age, ran a fragment from a barrel-hoop into the palm of the right hand. The wound healed and the splinter remained, giving no annoyance, save once at the age of twelve, until she was twenty-two years old, when she bruised the region in which lay the splinter. Great local pain and slight swelling followed, but soon passed away, and in three months she began to have pain in the right shoulder. The splinter was then removed from among the median nerve filaments, but the neuralgic pains grew worse, until the whole arm and hand

* Récherches sur quelques troubles de nutrition, etc. Paris, 1867.
† Des troubles trophiques consécutifs, etc. Paris, 1874.
‡ Du zona ophthalmique et des lésions oculaires, etc. Paris, 1872.
§ Am. Jour. Med. Sciences, July, 1874, p. 17.

were exquisitely sensitive, which distress was relieved for a few days by exsection of an inch of the musculo-spiral nerve. It then returned, and a thick crop of herpetic eruptions covered the right arm, neck, and face, which then disappeared. A year and a half later, when seen by Dr. Mitchell, there was an incessant secretion of sweat from the median palm, with an acid and heavy odor, the second finger and thumb-nails were curved laterally in a singular manner, the right index-nail being five sixteenths, and the left seven sixteenths of an inch broad. The general tint of the right hand was livid, and the arm liable to sudden alterations as to temperature, while the slightest irritation caused at first intense paleness, followed by definitely limited islands of deeply flushed skin. The skin of the thumb and index-finger was rough, ragged, and marked with yellowish patches of loosened epithelium. After the operation of exsecting three quarters of an inch of the median nerve in the middle of the forearm, the pain ceased, the eruption passed away, and a marked and steady change for the better took place in the color and vascular state of the limb. Ten months subsequently there remained absolute freedom from pain, and the nails of the two sides grew alike.

Another case is given by Mitchell, where a penknife was run into the palm of the hand, when neuralgia followed, and similar trophic changes in the hand.

At a recent meeting of the New-York Dermatological Society,* Dr. Keyes presented a patient with a cutaneous lesion following peripheric nerve-injury. A man, aged about forty, had received a crushing injury, whereby the middle finger of the left hand had been lost, and shortly thereafter there appeared a papillomatous growth on the back of the same hand. The patch was of a dull red color, of irregular shape, averaging about two inches in length by one in breadth, situated longitudinally in about the centre of the dorsum. The surface was irregularly elevated to the height, perhaps, of a line above the level of the skin, edges clearly defined, also papillomatous and not particularly everted; a little pus continually formed on the surface, which was moist, and from

* Archives of Dermatology, October, 1874, p. 47.

many points pus could be made to exude by slight lateral pressure.

Hayem * reports a case of crushing of the hand, for which first the fingers and afterward the hand, to the middle of the forearm, were amputated for non-healing. A year later, after a blow upon the shoulder, there was pain and stiffness, and a vesicular development about the stump, which appeared cool and livid. Later, the whole forearm became swollen and hot, and covered with vesicles. Charcot's case,† reported in 1859, was somewhat of this nature.

Hamilton ‡ gives a case of a girl, twenty years of age, in whom, after a wound on the inner surface of the thumb with a knife, which healed kindly, a subsequent train of trophic symptoms occurred, which were very distressing. The hand became swollen, at first pale, afterward red, œdematous, and exceedingly painful. Two months later the parts of the wound assumed a phlegmonous appearance, which, however, disappeared entirely in one night, and was repeatedly reproduced, but ceased with the pain, as well, after a season. There remained, thereafter, slight sensitiveness, and, during paroxysms of pain, the hand and arm became covered with perspiration.

Other instances could be cited, but we pass on to the consideration of our second and even more interesting and important pathological point, namely,

b. Eruptions attending lesions of conducting nerves. As is well known, the credit of attracting much attention to this form of nerve-trouble belongs to American surgeons, and the admirable little work of Drs. Mitchell, Moorhouse, and Keen§ has received ample recognition at the hands of all who have written on the subject since. But Charcot ‖ had previously, in 1859, published three cases, two of traumatic origin, where a skin-lesion was attributed to the nerve-disorder, to which report were

* Archives de Phys., 1873. No. 2. Viert. Jahressch. f. Derm. u. Syph., i., 1874, p. 98.

† Journal de la Physiologie (Brown-Séquard), 1859, p. 108.

‡ Archives génér. de Méd., 1838, t. ii. Mougeot, Sur quelques troubles de nutrition, Paris, 1867.

§ Gun-shot Wounds and other Injuries of Nerves. Phila., 1864.

‖ Journal de la Physiologie (Brown-Séquard), vol. ii., 1859, p. 108.

attached remarks by Dr. Brown-Séquard on the subject; and Paget,* in his lectures in 1854, mentions repeatedly cutaneous ulcerations following nerve-lesions. Since the appearance of the American work alluded to, numerous examples of this form of trouble have been published, so that now this branch of nerve-pathology of the skin may be considered as resting on a very sure foundation. We will mention in brief a few cases, by way of illustration.

To commence with simple compression of the nerves, the case related by Paget † is as striking and illustrative as any. A man in Guy's Hospital suffered from compression of the median nerve caused by excessive quantity of new bone thrown out after a fracture of the lower end of the radius. He had ulceration of the thumb, fore and middle fingers, which resisted various treatment, and was cured only by so binding the wrist that the parts on the palmar aspect being relaxed, the pressure on the nerve was removed. So long as this was done, the ulcers became and remained well; but as soon as the man was allowed to use his hand, the pressure on the nerve was renewed, and the ulceration of the parts supplied by them returned. Mitchell quotes Raynaud‡ in a case in which the ulnar nerve was compressed at the elbow, with the result of successive groups of phlyctenulæ seated exactly on the nerve-track. They were full of bloody serum, and left no ulcers when they broke. In these cases there was no inflammation, but in those related by Earl, Romberg, and Kuhl there was inflammation about the bullæ. In a case of nerve-injury by pressure at the wrist, Mitchell saw the thumb rapidly covered on the fourth day by a large bulla, and looking as if blistered. "Mr. Hutchinson reports a similar instance where there were marked inflammation, bullæ, and ulceration. It would be easy to extend the list if this were desirable."§

The most commonly observed disturbance of nutrition after injuries of nerve-trunks, is the erythematous state of skin, the *glossy skin* of Paget, as described more fully by Drs. Mitchell,

* Lectures on Surgical Pathology. Phila., 1854, p. 40.
† Loc. cit., p. 42.
‡ Thèse de Paris. 1862, p. 156.
§ Injuries of Nerves. Philadelphia, 1872, p. 154.

Moorhouse, and Keen,* and which has been repeatedly noticed by others. They thus describe it: "The skin affected in these cases was deep red or mottled, or red and pale in patches. The epidermis seemed to have been partially lost, so that the cutis was exposed in places. The sub-cuticular tissues were nearly all shrunken, in the fingers there were often cracks in the altered skin, and the surface of all the affected parts was glossy and shining as though it had been skillfully varnished. In most of them the part was devoid of wrinkles and perfectly free from hair."

A very constant feature of this state of skin was the occurrence of eczematous eruptions, which appeared as minute vesicles thickly scattered over the thin and tender cutis, or else showed themselves in successive crops of larger vesicles on the skin about the altered parts, with usually a preference for the portions which lay nearer the trunk. The nails and hair may undergo very curious changes consequent upon nerve-wounds. After total section, says Dr. Mitchell, the nails are apt to be clubbed, and, in rare cases, to suffer from painless whitlow. In lesser nerve-wounds ulceration around the nails is common and often very painful. This red and glossy skin, and these other nutritive changes, as in the nails, are generally attended by severe burning pains, or causalgia, as Dr. Mitchell calls it.

We will not now cite cases illustrative of this form of lesion, as they are so numerous and well-attested by so many competent observers as to be familiar to all and render it unnecessary; and, moreover, it were difficult to make a selection. We may mention, however, that we have observed an almost precisely similar state of the skin of both feet and legs to the knees, and the back of the right hand, with itching and burning, where there has been no traumatism whatever, the parts undergoing very material improvement under the use of the constant current, locally and generally applied. We will then pass on to our third pathological illustration of the influence of the nerves in producing skin-lesions, namely,

c. Eruptions accompanying brain and spinal disease.

This, a less trodden field, presents much of interest, and has

* Injuries of Nerves and their Consequences. Phila., 1872, p. 157.

received sufficient attention to demonstrate certain facts beyond doubt. The observations may be noted under the two heads, (*a*) traumatic injury of the cord and encephalon, and (*b*) idiopathic disease of the same.

(*a*) Traumatism of the cord gives rise to very much the same dermal lesions as in the case of wounds of nerve-trunks; the epidermis and nails undergo the same alterations, vesicles frequently appear, and the erythematous redness is also present. Couyba* gives a striking case of this. A man, aged 25, received a bullet-wound of the left side about the tenth rib; the ball traversed the vertebral column, and came out seven or eight centimetres from the spine on the right side. Incomplete paralysis of the left leg followed, with anæsthesia of that side, and incomplete anæsthesia of the right side, and fair movement. Two days later marked hyperæsthesia developed, more defined on the right than the left side, with itching and burning pains, and slight redness on the soles of *both* feet, and two days still later erythematous patches appeared on both legs, having much the appearance of erythema nodosum, there being a dozen spots on one leg, attended yet with great hyperæsthesia. At the necropsy, nineteen days after the injury, intense spinal meningitis was discovered, but no myelitis or alteration of the gray substance. There was, however, neuritis of the *cauda equina*, and an evident atrophy of some nerves.

Gailleton† quotes Gaillard in a case where, immediately after fracture of a vertebra, numerous vesicles appeared on the left leg for a month, the temperature of the paralyzed parts was much elevated, and the perspiratory secretion augmented. Later the lower limbs increased greatly in size, with œdema, and assumed much of the elephantiasic aspect, ulcers and gangrene supervened, and the patient died three years after the accident.

More commonly ulceration and sloughing, the *decubitus acutus* of Charcot, are observed very soon after a spinal injury, especially on parts exposed to pressure, and when of very speedy occurrence must be traced to the influence of disordered ner-

* Des troubles trophiques consécutifs aux lésions traumat., etc. Paris, 1877, p. 53.

† Traité Élémentaire des Maladies de la Peau. Paris, 1874, p. 285.

vation. Thus Sir Benjamin Brodie has observed sloughing of the heels twenty-four hours after a lesion of the spine.*

H. Schmidt reports a case of herpes zoster after a contusion of the vertebral column.† A man was confined to bed for eight days after a fall of ten feet, with pain in the loins and left thigh. Improvement followed, but not a complete cure. After three weeks a zoster eruption appeared, following headache and fever, with great pain along the track of the ilio-hypogastric, ilio-inguinal, and genito-crural nerves, which all arise from the first and second lumbar nerves. Charcot and Cotard ‡ observed an eruption of zoster in a case of cancer of the vertebra.

E. Wagner is quoted by Charcot § in a case of zoster of the ninth and tenth left intercostal spaces, in a young man with pulmonary phthisis in whom the last six dorsal and first two lumbar vertebræ were carious, and the dura-mater enveloped in caseous pus which reached into the sheaths of the nerves and spinal ganglia.

Finally, hair has been observed to grow luxuriantly on paralyzed parts after a traumatic paraplegia.‖

Much the same trophic changes have been observed in the skin after (*b*) idiopathic disease of the brain and cord. Charcot ¶ has repeatedly seen in chronic spinal meningitis, with thickening of the dura-mater, various cutaneous eruptions, resembling sometimes zona and sometimes pemphigus. Brown-Séquard ** has recorded the existence of special cutaneous eruptions on the arm, in a case of spinal meningo-neuritis of the inferior cervical region. Erythema, zona, muscular atrophy, and certain joint troubles have been connected, by M. Duménil, with chronic progressive neuritis, and by M. Leudet †† with a peripheric neuritis, following asphyxia with carbonic acid.

* The Influence of the Nerves on Nutrition. Henry Power. The Practitioner, Feb., 1873. p. 101.

† Leyden: Klinik der Rückenmarks Krankheiten. Berlin, 1874. p. 153.

‡ Gazette Medicale de Paris, 1866. No. 15. Leyden, loc. cit.

§ Leçons sur les maladies du système nerveux. Paris, 1872–73. p. 26.

‖ Brit. Med. Jour., June 14, 1873. Quoted in Berlin. Klin. Wochenschr., Jan. 5, 1874.

¶ Loc. cit., p. 27.

** Dublin Quarterly Jour. of Med., May, 1865. Charcot, loc. cit.

†† Récherches sur les troubles des nerfs periphériques, etc. Archiv. Gen. de Méd., May, 1865.

According to Charcot, papular or lichenous eruptions, urticaria, zona, and pustular eruptions resembling ecthyma, are observed in the course of locomotor ataxia, especially in connection with the access of the lancinating pains. In one case pustules of ecthyma were followed by deep ulcerations and a slough on the sacrum. Gailleton* reports a case of ataxia with attendant urticaria for many months, in brief as follows: A female, aged 32, of a good constitution, had locomotor ataxia for a year. Six months after its appearance strabismus and facial paralysis occurred, which disappeared spontaneously. At the time these appeared the patient complained of sharp cutaneous pain, and numerous patches of urticaria were seen on the arms, thighs, neck, and body. These urticarial patches lasted individually but a few hours, but were reproduced with great rapidity on different parts of the body, and were accompanied with most distressing pruritus. This eruption lasted for nearly a year.

Bourneville† reports a case of sclerosis in patches of the spinal cord, where, with disturbance of the intellect, contraction of the limbs, chills, and other nervous phenomena, there was herpes labialis, a diffuse erysipelas, œdema of lower limbs, and bed-sores, and at post-mortem examination sclerotic lesions of the cord were found. Leyden ‡ speaks of herpes zoster facialis being not infrequently found during attacks of cerebro-spinal meningitis. Lancereaux gives a case of exfoliative dermatitis following hemiplegia, aphasia, and other nervous phenomena.§

Gailleton‖ mentions the case of a woman aged 75, who had several attacks of apoplexy, and with the last, which caused death, an intense erythema appeared on the neck and upper part of the chest. Also, two cases of apoplexy attended by an eruption of zoster, in one case on the thigh, and in the other on the nape of the neck. Gailleton further quotes Lombroso¶ in regard to certain cutaneous manifestations in mental alienation,

* Traité Elémentaire des Maladies de la Peau. Paris, 1874, p. 286.
† La Sclérose en plaques disseminées. Paris, 1869, p. 193.
‡ Klinik des Rückenmarks Krankheiten. Berlin, 1874, p. 253.
§ Traité Elémentaire des Maladies de la Peau. Paris, 1874, p. 288.
‖ Gaz. Méd. de Paris. Am. Jour. Syph. and Derm., Oct. 1874, p. 429.
¶ Giornale Italiano delle mal. ven. e delle mal. della Pelle. 1867. Fasic. 7.

Arthaud* in the same state, Billod † as to pellagra in the insane, and also Teilleux ‡ on the same subject. Further, others with reference to eruptions attending epilepsy and hysteria, which we can here only mention. Mougeot§ quotes Thomas in a case of herpes zoster, after strenuous exertion in lifting a heavy sack of grain, after the occurrence of a sudden and sharp pain in the side during the act.

Our fourth and last division of the pathological part of this study will claim our most earnest consideration for many reasons, and although the evidence here rests on comparatively few recorded facts, still it is of very great weight in determining the true position of neuro-pathology in relation to diseases of the skin. It is—

d. Idiopathic nerve-lesions found post mortem in nerves supplying diseased skin.

To commence with the disease which has, more than any one other, perhaps, contributed to this branch of study, *herpes zoster*, let us see what has been learned from macroscopic and microscopic examination of the nerve-elements. Neumann ‖ gives this very succinctly, thus: Danielssen found the sixth left intercostal nerve swollen and reddened by a firm infiltration of the neurolemma, the medullary portion being normal. Bärensprung found the intercostal nerves thickened and injected, and their spinal ganglia correspondingly altered, the inflammation being mostly in the neurolemma; the inflammation did *not* spread from the ganglia to the cord, but, on the contrary, in a peripheral direction. Bärensprung considered zoster as an affection of the ganglionic system, although peripheric irritation of a nerve leading to a ganglion can be followed by a limited zoster eruption in a reflex manner. Weidner ¶ and E. Wagner **

* Lyon Medical—Mars 2, 1873 (Société de Med. de Lyon, Jan. 29, 1873).

† Traité de la pellagre d'après des observ. rec. en Italie et en France. Observ. xi. Paris, 1865.

‡ D'une varieté de pellagre propre aux alienés. (Annales medico-psychologiques, 1860.)

§ Recherches sur quelques troubles de nutrition, etc. Paris, 1867, p. 38.

‖ Lehrbuch der Hautkrankheiten. 3d edit. Vienna, 1873, p. 181.

¶ Berlin Klin Wochenschrift. 1870, 7. (Archiv f. Derm. u. Syph., 1870, p. 622.)

** Virchow's Archiv, Bd. ii., 4 Heft.

found also changes in the spinal ganglia similar to those observed by Bärensprung and others. Wyss* had an opportunity of watching during life, and dissecting after death, a case of zoster occupying the region innervated by the first branch of the right trigeminal. The nerve was found to be broader and thicker than that of the left side, of a deeper gray-red color, of softer consistence, and with the several nerve-fasciculi separated by grayish-red, soft tissue containing many vessels. This alteration extended from the point where it entered the orbit to the finest branches, as far as they could be traced with the simple lens. The other nerves traversing the orbit were perfectly healthy. Outside the orbit, and extending from it to the Casserian ganglion, the first branch of the fifth was surrounded by extravasated blood. On the proximal side of the Casserian ganglion the nerve was normal in appearance. The ganglion itself was larger and somewhat more succulent than the left; upon its inner side was a red mass apparently caused by an ecchymosis. The proper substance of the ganglion was not of a yellowish white color, but bright red. The nerve was healthy at its apparent origin from the brain, but where it entered the ganglion there were numerous ecchymoses; also the same in the ganglion, especially visible where the first branch of the fifth nerve arises.

Haight† found cell-proliferation around and in the neurolemma in herpes zoster, the nerves swollen, the medullary substance softened, and the axis cylinder eccentrically enlarged.

Charcot and Cotard‡ found neuritis of the cervical plexus and corresponding ganglia of the posterior roots in a case of zona of the neck.

After traumatic eruptions, alterations are found in the nerves of much the same character. Thus Mitchell§ quotes a case reported by Mr. Swan in 1820, in which there were ulcerations on the hand after severe wrenching of the wrist. After amputation, some time later, he found hypertrophy of the me-

* Archiv der Heilk. Lond. Lancet, Oct. 3, 1872.

† Neumann: Lehrbuch der Hautkrankheiten. 3d ed., Vienna, 1873, p. 185.

‡ Memoires de la Soc. de Biologie. 1866, p. 41. Mougeot, Thése cit., p. 61.

§ Injuries of Nerves and their Consequences. Phila., 1872, p. 96.

dian nerve beneath the annular ligament, and several gangliform enlargements of digital nerves.

In Dr. Mitchell's* case of severe brachial neuralgia, with herpetic eruption and trophic changes, in which nerve-section was performed, as before alluded to, the exsected nerves were found similarly affected, the individual nerve-fibres presenting the principal changes. In very few of the rings of the secondary fasciculi could the axis-cylinder be recognized, even with high powers, the individual nerve-fibres being no longer clearly defined, but presenting a confused mass of concentric rings. These changes were somewhat different from those in chronic hyperplastic neuritis.

In the remarkable case of painful neuroma of the skin, reported by Drs. Duhring and Maury,† for which exsection of a portion of the brachial plexus was performed, there were much the same changes found, as also in the case of excision of part of brachial plexus for traumatic brachial neuralgia reported by Drs. Sands and Seguin.‡

Another striking illustration of this branch of neuro-pathology of the skin is found in the pathological appearance in *lepra anæsthetica*, or elephantiasis Græcorum. According to Virchow,§ the initial morbid process consists in a perineuritis, characterized by a cellular proliferation of a special, leprous character, situated between the nerve-tubes, which it slowly destroys. The nerves present, then, frequently, somewhere in their course, a fusiform tumefaction, which is sometimes easily recognized during life at the places where they lie superficially, as at the elbow. These alterations produce first hyperæsthesia, later anæsthesia.‖

These changes in leprosy have been admirably described and delineated by Boeck and Danielssen ¶ in their magnificent work on skin-diseases.

* Am. Journal Med. Sci., July, 1874, p. 26.

† Am. Journal Med. Sci., October, 1873, and July, 1874.

‡ Archives of Sci. and Pract. Med., Jan., 1873, p. 1.

§ Die Krankhaften Geschwülste. Nerven-Lepra, ii., p. 521. 1864–5

‖ See case. Med. Times and Gazette, April 11th, 1874.

¶ Receuil d'observations sur les maladies de la Peau. 1, 2, and 3 Liv. Christiania, 1860.

Bergmann,* from a dissection made in the beginning of the disease, determined that the bullæ of leprosy depended upon a leprous degeneration between the bundles and the fibres of the nerves. Steudener† further found that often the whole nerve is not thus affected, which accounts for the partial anæsthesia sometimes found, with normal intervals of integument. Some observers have thought that characteristic disease could be made out in the brain and spinal cord, but this has been disputed by others, and is still in doubt.‡

Finally, in the true prurigo of Hebra, Dr. Gay, of Kasan,§ has found between the cells of the rete Malpighii, isolated branching structures with small nuclei, which he regards as probably the altered terminations of the nerves, which we have alluded to as having been found by Podcapaew and Eberth in this situation. Neumann‖ thinks an examination of the cutaneous nerves might lead to the discovery of some alteration in their structure, as furnishing the cause of prurigo.

4. Having now briefly gone over the principal points of neuro-anatomy, physiology and pathology, as related to the skin, let us, in a few words, recapitulate, in order the more clearly to draw our deductions therefrom as to the nerve-relations of diseases of the skin.

1. We have, then, in the *microscopic anatomy* of the skin, in addition to the vaso-motor nerves distributed abundantly to the smaller arteries and capillaries, controlling their expansion and contraction, and besides the medullated fibres terminating in the Pacinian corpuscles and those of Meissner, the abundant supply of ultimate nerve-fibres to the cells composing the upper layers of the skin, where a large share of cutaneous disease is located. This mode of nerve-termination between the cells of the rete mucosum has been verified by numerous observers, and

* Die Lepra in Livland. St. Petersburg, 1870, p. 31. (Simon: Die Localiz. d. Hautk., p. 83.)

† Beitr. zur Pathol. de Lepra mutilans. Erlangen, 1867, p. 19. (Simon: Localization, etc.)

‡ Simon: Die Localizat. der Hautkrankheiten. Berlin, 1874, p. 84.

§ Archiv für Dermat. u. Syph. 1871, p. 5.

‖ Lehrbuch der Hautkrankheiten. 1873, p. 288.

traced also in the mucous membranes, likewise in the cornea and in the lining of sebaceous glands.

2. *Physiologically* we have found that simple vaso-motor disturbance is incapable of effecting much cutaneous lesion, and that withdrawal of nerve-influence by section likewise produces but slight and temporary changes; also that experimental physiology likewise fails to induce pathological change in the structure of the skin. We further found close physiological relations between the skin and other organs, evidently the result of neural connection, as flushing and blanching of the surface, and cutaneous perspiration associated with functional derangements of internal organs or mental emotions.

The sensations of itching, burning, and pain, also hyperæsthesia and anæsthesia, together with certain local paralyses, were cited as common illustrations of the nerve phenomena of cutaneous disorders. The pain in herpes zoster, corresponding so closely to the area of distribution of the eruption, is a definite demonstration of nerve-implication, especially when taken in connection with the pathological conditions found post mortem. The prodromal and associate neurotic phenomena of *lepra anæsthetica*, or elephantiasis Græcorum, with its corresponding post-mortem appearances, afford also conclusive proof in this direction.

The physiological distribution of these and other eruptions upon cutaneous nerve-tracts, as also the phenomena of reflex irritation, were further cited as weighing considerably in the direction of the neuro-pathology of skin-diseases.

3. *Pathological* observation we found to be rich in demonstration of the direct connection between nerve-influence and nutritive changes in the skin. We saw that peripheral nerve-injury was followed by cutaneous lesions, that lesions of conducting nerves were very constantly followed by the same, and that traumatic and even idiopathic disease of the spinal cord and brain was not infrequently accompanied by certain forms of disease of the skin. Lastly, we recalled the very striking nerve-lesions found in herpes zoster, in the cases of traumatic nerve-injury followed by skin-disease and in lepra anæsthetica.

Here our direct proof must cease, and with this may well rest the argument for neuro-pathology of skin-diseases. We have

found nerve-section or nerve-abnegation incapable of exciting these disorders, but nerve-*irritation* abundantly able, and it is nerve-*irritation* which is excited by the new deposits of leprosy and syphilis, or by the circulation of the effete products of gout, rheumatism, scrofula, etc., or the ill-assimilated elements in dyspepsia, constipation, oxaluria, and the like. We have seen how large a number of skin-disorders may be the result of reflex action; that there are others than those proven, or those we have mentioned, there is no doubt. How can we better explain the pathological action going on in the outer portions of the skin, which are away from capillary influence, as in certain skin-affections, than by nerve-action, when we find much the same alterations following direct nerve-injury, as already mentioned?

That nerve-disease has not been observed and recorded in a larger share of diseases of the skin, is no evidence of its non-existence. If investigations in this direction have been made unsuccessfully, we do not know of it, nor could want of success be demonstrative, inasmuch as the opportunities or instruments may have been imperfect, or the changes such as to escape observation hitherto. The field is a broad and interesting one, and invites pathologists to enter it. Certainly the nerve-elements in eczema, urticaria, pruritus, prurigo, erythema, etc., are plain enough to entice to a fuller knowledge of their relations.

Not less striking are the therapeutical indications of a neuro-pathology of skin-diseases. Among our very best remedies are iron, quinine, strychnine and arsenic, potent also in nervous disorders, while electricity, long serviceable in the latter, is claiming a high place in cutaneous therapeusis. If asked as to the action of other remedies, as the alkalies, acids, vegetable and mineral products, we reply, by so altering or removing elements which cause nerve-irritation, that normal innervation returns and continues. The action of cod-liver oil, nutriment, fresh air, exercise, and so on, can be answered equally well by the neuro-pathologists as by ourselves.

We confess to a little surprise at the manner and fullness with which our subject has expanded under study, and also at the quite definite conclusions which our investigations have

forced upon us; but the latter seem to be necessary sequences of the abundant clinical observation recorded, which we have, indeed, barely alluded to, and the clearness and positiveness of the study have lent a fascination not easily avoided. We trust, however, that we have presented in a concise form such evidence as will lead to the fuller acceptance of the views as to the very important influence which the nerves have over nutrition, and the very close connection between many cutaneous lesions and disorders of the nerves, and finally, perhaps, to a closer investigation of the very important subject of the neuro-pathology of skin-diseases.*

* As we are going to press we notice the excellent contribution to this subject by Dr. Clifford Albutt, in *The Practitioner* for November, 1874, p. 316. It is not a little interesting that the same subject should be studied simultaneously in England and America—there from a clinical and here from a pathological point of view. We shall hope to comment on this article later, and to add further data from our own experience. L. D. B.

THE

RELATIONS OF THE NERVOUS SYSTEM

TO

DISEASES OF THE SKIN.

(Part II. Clinical.)

HAVING studied the Relations of the Nervous System to Diseases of the Skin, from 1, Anatomical, 2, Physiological, and 3, Pathological stand-points,* we are now prepared to enter upon the more important practical parts of our subject, namely, 4, Clinical teachings; 5, Conclusions; and 6, Therapeutical considerations.

4. *Clinical Teachings.* In the preceding portion of this article I have already given a number of clinical illustrations relating to the physiological and pathological portions of the subject, and the present observations and cases pertain more particularly to what is commonly understood as clinical evidence, especially where either the features of the disease or concomitant phenomena point to neurotic elements.

I will first review the remarkable articles by Rendu,† which have appeared since my former article, and consider also the clinical article contributed by Dr. Clifford Allbutt,‡ to which reference was made in a note, as appearing too late for other mention, referring also to an article on this subject, partly clinical, which has since appeared by Dr. S. G. Webber, of Boston.§ Dr. Rendu conceived the idea of testing the skin in its several morbid states, in reference to three sensations: that of touch, changes of temperature, and pain; and he gives us quite a number of cases—over thirty—where these tests were made and recorded. Beginning with simple inflammation of the skin, as produced by a vesicatory, before any bullæ had appeared, he found

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* Archives of Electrology and Neurology, November, 1874.

† Annales de Dermatologie et de Syphiligraphie, Vol. V., No. 5. Vol. VI., Nos. 1, 2, 3.

‡ The Practitioner, November, 1874, p. 319.

§ Bost. Med. and Surg. Jour., Dec. 17, 1874.

hyperæsthesia and hyperalgesia, (increase of the feeling of pain,) but a blunting of the perception of temperature. Almost the same was observed in eight cases of erysipelas. In a case of very pruriginous herpes iris he found slight tactile hyperæsthesia, and in a case of marginated erythema the tactile and thermal sensibility were normal, but a superficial analgesia (loss of the feeling of pain) existed. Ten cases of eczema were studied, and very generally gave a diminution of the tactile and thermal sensibility, while the sensitiveness to pain was either normal, increased, or diminished. Very much the same states were found in chronic lichen, while in a case of pityriasis rubra circinnata there was diminished tactile sensibility, and analgesia was very marked in the centre of the patches. Psoriasis yielded much the same results. He further found disordered sensibility very marked on the surface in the track of herpes zoster, there being exaggerated tactile sensibility to the extent that, while two points of the compass were distinguished on the diseased side at a distance of 13 millimetres, on the corresponding portion of the unaffected side of the body they were separated 7 centimetres before recognized, or more than five times the distance. Sensibility to pain was equally exaggerated, but very unequally distributed, as there were certain points of complete analgesia alongside of hyperalgesic spots. The hyperæsthetic zone extended for the distance of a line beyond the limit of the hyperæmic surfaces; seven cases of zona thus gave irregularities of sensation. He found also certain sensory disturbances around the eruption of purpura, and pemphigus likewise presented similar abnormalities. In many of these instances he found the normal sensations of the parts return as the eruption disappeared.

He draws certain conclusions from these researches which I will quote: it would be highly desirable to have them further proven and elaborated by others. The changes he has observed he has grouped into four classes, as follows:

"1. Diminution of tactile and thermal sensitiveness, that of pain being preserved intact. This is the most commonly observed (eczema, psoriasis, lichen).

"2. Exaltation of the sense of touch and of pain, the percep-

tion of temperature being blunted; this is the type of frank dermatitis, and pertains also to erysipelas, herpes, certain erythemas, and a good portion of the artificial eruptions.

"3. Preservation of the tactile and thermal sense, coinciding with more or less marked analgesia (certain forms of psoriasis, pityriasis, and leprosy).

"4. Finally, in certain cases the hyperæsthesia is associated with anæsthesia and analgesia, the sensitiveness to temperature remaining unchanged or diminished. This is observed in zona which forms a class by itself."

In the succeeding portions of the very interesting and able paper, Dr. Rendu goes over some of the points given in my former article, and makes strong claim for neural influence in producing very many of the diseases of the skin.

Coincidently Dr. Clifford Allbutt furnished a good clinical contribution to the subject, looking at it from yet another point of view. He gives the headings of eighteen cases, in each of which there were concomitant nervous ailments, and which demonstrate measurably the *neurotic relations*, at least, of several diseases of the skin. The list embraces ten patients with eczema, three with urticaria, two with psoriasis, one with lichen, one with itching pityriasis, and one with "a curious skin affection partaking of the characters of pemphigus and of rupia." The following are specimens of the evidence: "1. Mrs. A., a neurotic all her life, has suffered much from gastralgia and tic of the head and face. Has eczema behind both ears. 3. Mrs. B., wife of a medical man, had obstinate and severe gastralgia eight years ago, and now has extreme nervous depression and paræsthesia. Has severe lichen in head and neck. 7. Mrs. K., migraine from childhood, facial neuralgia frequent, one attack of cervico-brachial neuralgia, severe recurring gastralgia. Has had four attacks of eczema. All her affections were wonderfully relieved by arsenic. 12. Mr. L., a great sufferer from neuralgia; very subject also to eczema over arms, legs, and trunk."

The limits I had assigned to this article forbid further quotations, which could be multiplied, as periodical literature presents isolated examples of the influence of the nervous system in producing cutaneous alterations. I will give in brief some

cases which I have recently noted in private practice, which appear to weigh strongly in the direction of our subject. The cases which I shall allude to at the present time are thirty-five in number, as follows: Eczema, eleven; Acne, nine; Psoriasis, four; Erythema, two; Pruritus, two; Herpes gestationis, two; Lichen, one; Alopecia areata, one; Leucoderma, one; Morphœa, one; Elephantiasis Græcorum, one. The notes were taken at various times, without any reference to nerve relations—indeed many of them long before my attention was seriously directed to the subject. I will allude to them briefly in the above order.

1. *Eczema.*—Miss D., aged 53, is executive officer of a charitable institution. Tuesday's work of each week is very severe and trying, and the night often sleepless, and is always followed on Wednesday by either a fresh outburst of the eruption or by a great aggravation of that existing. This had been the case for some months before I saw her, and it was observed to occur several times during treatment. The eczematous eruption occupied the face and backs of hands. The nerve elements of itching and burning were very marked. She has always been subject to great headaches, which have ceased since the appearance of the eruption.

2. *Eczema.*—Rev. Dr. B., a prominent clergyman in a neighboring city, has had for many years an eczema of the head and face, which he finds to be always worse on Monday, after the Sabbath's mental work and strain, and which is particularly bad whenever extra work is called for, as the tax of preparation for and fulfillment of other public duties, to which he has frequent calls.

3. *Eczema.*—Mr. J., aged 39, has had pruritus of the anus for eight years, with eczema extending on to scrotum; this is largely developed from the continued scratching. He complains principally of the itching and burning about the end of the sacrum, deep in, which he describes as the most horrible torture. He feels the distress to be very largely due to the great mental overstrain to which he is subject, as he has charge of about three thousand operatives in a very large manufacturing community, superintending both their work and their dwelling-houses, and having charge as well of a Sabbath-school organized for them.

Extra work or anxiety will always aggravate the difficulty immensely, whereas absence from duty affords much relief to the pruritus. Remedies seem useless while he is occupied with his business, but moderate the itching and the eruption when in this city and away from home.

4. *Eczema.*—Mrs. V. T., aged 46, with eczema of the right hand, is of exceedingly nervous temperament. The affected hand trembles almost as if affected with paralysis agitans. She has also marked *globus hystericus* and gastralgia. The family history is remarkable for longevity; her father is living, at 75 years of age, grandmother died at 99, two aunts at 103 and 108 years. Under arsenic and phosphoric acid all the symptoms improved very greatly, and on neglect of treatment the nervousness returned and with it the eczema. The left hand trembled but slightly, and had only a trace of eczema on it. The itching feature in this case was marked.

5. *Eczema.*—Mr. B., aged 39, has had eczema on the legs every winter for the five years previous to being first seen. His brother has had eczema on hands and over body; his health also is much broken and he is incapable of brain work. The patient's father died at 59 years of age, with hemiplegia of the left side; his mother and one sister died of similar trouble; mother had also eczema. The patient is of a very nervous temperament. A railroad accident causing a slight contusion of the left forehead was followed by ptosis, strabismus and double vision of left eye; also pains in the right side, and anæsthesia.

6. *Eczema.*—Mr. S., aged 57, has been working very hard for few years past; has great financial interests and finds that his eruption, which occupies the lower legs, popliteal spaces, and scrotum, is aggravated by mental strain. His mother was subject to migraine. He is of a very bilious temperament, sluggish bowels, etc., but has himself noticed the nerve element in the case. The itching is a very serious feature; for some time the sleep has been very poor.

7. *Eczema.*—Miss T., aged 35, is a most perfect specimen of a neurotic female, having innumerable and indescribable nervous symptoms, among others great cutaneous hyperæsthesia, especially of the scalp. She has an oily seborrhœa of the scalp, and

eczema of the face and some portions of the head. Itching is quite a prominent feature, both of the diseased surfaces and of the whole body at times.

8. *Eczema.*—Miss C. T., aged 65, has eczema of the shoulders and about the nipples, following a protracted and distressing watching till death of a sick child. She has long had gastralgia, and itching is marked.

9. *Eczema.*—Mr. B., a clergyman, aged about 24, has eczema of the scrotum, of which the itching is the main symptom, which is always worse after mental strain.

10. *Eczema.*—Mr. G., aged 47, a busy manufacturer, has eczema of the scrotum, beginning solely as a pruritus. Had several attacks of asthma.

11. *Eczema and herpes zoster ophthalmicus.*—Mr. B., a very nervous and excitable gentleman, aged 56, a lawyer with great professional and financial interests; has had eczema on various parts of the body for some years. When first seen he was suffering from a frontal herpes zoster of the left side, which was accompanied by most severe neuralgic pains in other parts of the head as well. The neuralgia persisted distressingly for a long peried in spite of most patient and varied treatment, galvanism included. He had always had neuralgic headaches.

12. *Acne rosaceà.*—Miss H., aged 22, has had more or less acne rosacea for several years. She presents all the phenomena of hysteria, with much of true nerve suffering. She has numbness in various parts of the body, severe gastralgia and intercostal neuralgia, neuralgic headaches, and hysterical dysuria, fainting spells, nausea and irregular chills.

13. *Acne rosacea.*—Miss B., aged 26, has had rosaceous acne for three or four years, from no known cause; tongue clean, appetite and digestion good, bowels and menses regular and normal. Her mother has *tic douloureux* of the right side very severely. The patient is very nervous, has cold hands and feet, and a very variable pulse. Her treatment consisted in quinine, iron, and nux vomica; after remedying an existing oxaluria with acetate of potassa, the disease disappeared entirely; soothing and slightly stimulating local measures being also used.

14. *Acne rosacea.*—Miss —, aged, 30 has suffered from the

effects of malarial influence for some years. Her sister is a martyr to neuralgia not amenable to any treatment. The patient has a cataract forming in the left eye, attended with much deep seated neuralgic pain. She was formerly subject to "rose cold." She is improving steadily under iron and strychnine, with the occasional use of acetate of potassa.

15. *Acne rosacea.*—Miss S., aged 21, has had nervous dyspepsia for several years, intense gastralgia, palpitation of heart, and restless sleep, dreaming. She experienced the most benefit to the face trouble from phosphoric acid, iron, quinine, and arsenic, guarding the stomach from dyspepsia.

16. *Acne rosacea.*—Mrs. V., aged 44, is a nervous lady, very subject to spasmodic asthma, which is inherited, her grandmother, uncle, and those of the immediate family having it. Her acne has been much benefited by phosphoric acid.

17. *Acne rosacea.*—Miss C., aged 28, has had rosaceous acne for about a year; the face has been subject, however, to red patches for several years. She is rather nervous, very active in charitable work, has from time to time had various nervous symptoms, dizziness, headache, etc. She has had also, while under my care, a well marked and obstinate attack of general urticaria. She has taken phosphoric acid, iron, and nux vomica, with great benefit to the acne, after regulating the bowels and digestive organs.

18. *Acne indurata.*—Miss C., aged 22, a most painful case of indurated acne; has had for several years intense neuralgia, abdominal and intercostal fainting spells, palpitation of the heart and irregularity of pulse, without any appreciable heart lesion.

19. *Acne indurata.*—Mr. R., aged 38, an overworked and harassed clerk; had a face very badly disfigured by acne indurata. He always noticed that business worry aggravated greatly his cutaneous difficulty. Iron and mineral acids have cured him completely, after a moderate course of blue mass, colocynth, and acetate of potassa.

20. *Acne simplex and indurata.*—Mr. L., aged 27, says that his acne is always much worse when he is mentally overtaxed.

21. *Psoriasis.*—Mrs. C., aged 34, has had psoriasis off and on for many years. She is a very nervous lady, although possessing

great self control, and is very largely occupied in home and benevolent duties. She is subject to neuralgia, nausea, restiveness, and sleeplessness.—When first seen the eruption itched fearfully, which has since been a marked feature.

22. *Psoriasis.*—Miss H., aged about 40; is very nervous and hysterical at times, subject to headache and gastralgia. She has had psoriasis very generally distributed over the body for many years, which disappeared entirely and remained absent for the longest period within her recollection, from the internal use of phosphorus. Arsenic has been of considerable service, but has lost power of late.

23. *Psoriasis.*— Mr. S., aged 33, a very intelligent gentleman, a dentist, has long noticed that when he gets nervous, worried, constipated, and dyspeptic, his psoriasis is sure to appear.

24. *Psoriasis.*—Mr. B., aged 55, has had psoriasis for 50 years. His father had it, also his oldest child, a son; his second child, likewise a son, has psoriasis and asthma, the asthma being better when the psoriasis is out; his third child, a son, died at the age of 22, feeble and idiotic, psoriasis developing just before death; the sixth and seventh children, both daughters, have psoriasis; the seventh, aged 15, being under my treatment. She is very nervous, and the eruption is very itchy and partakes more of the characters of eczema. The patient is a large man, of full habit, with a tendency to cerebral congestion.

25. *Erythema urticatum.*—Mrs. S., aged 45, has Graves' or Basedow's disease, as indicated by exophthalmos and goitre, with palpitation and irregularity of the heart; and for several months while under observation had most distressing general pruritus, accompanied with transient œdematous swellings of various parts of the body, sometimes distorting the face greatly, sometimes making the hands or portions of them of unnatural size, always with more or less erythema. She was very hysterical, and said that she never perspired. Treatment afforded her but very little relief; it was followed out, however, only three weeks.

26. *Erythema facei.*—Mrs. —, aged 36, is as nervous and hysterical a lady as is often seen, the subject of most intense burning neuralgia. She has erythema of the face, seated chiefly in the region where the neuralgia exists—that is, about the forehead and

at the root of the nose; also on the cheeks. The pain is sometimes deep seated, sometimes superficial.

27. *Pruritus.*—Mrs. L., aged 34, has on three occasions had intense pruritus occupying various parts of the body. On one occasion it was during pregnancy, and on its subsidence under treatment, a nervous hoarseness appeared, which ceased at once on delivery. This hoarseness occurred in a similar manner with a previous pregnancy. She is subject to neuralgia, is very nervous, and says that her mother was the same.

28. *Pruritus.*—Miss G., aged 35, has a pruritus ani which has resisted the most varied treatment from the hands of many physicians for at least two years. No cause can be made out; no lesions exist save those caused by scratching, and the disease must be reckoned a neurosis, but I have no other recorded symptoms as proof.

29. *Herpes gestationis.*—Mrs. E., aged 33, has three times, with pregnancy, had the disease develop which I have described with the above name in the Journal of Obstetrics for February, 1874, giving this case. In the intervals she has had attacks of urticaria; also neuralgia. The second and third attacks of the disease were greatly moderated and arrested by quinine, strychnine and arsenic. The disease was described and exists clearly in my mind as a reflex neurosis.

30. *Herpes gestationis.*—Mrs. C., aged 32, was another less marked case of the same disease, whom I saw but once in consultation.

31. *Lichen agrius.*—Mrs. M., aged 32, has for several years had a lichenous eruption on the right arm and shoulder, seemingly dependent upon the enormous nervous overstrain that the hand and arm has been subjected to in writing. She is a perfect type of a neurotic female, having had, as she says, general paralysis, and having insanity in her family. This case was referred to in the previous article, page 254.

32. *Alopecia areata.*—Mr. H., aged 24, is very nervous, wakeful at night, working very hard, and with a quick pulse, varying from 90 to 104. A small patch of perfectly smooth white skin has appeared quite recently on the right temple, just above the ear, with no vestiges of hairs. This is improving under the

local application of tincture of capsicum and glycerine, with strychnine, quinine, iron, and latterly arsenic, internally.

33. *Leucoderma.*—Mr. J., aged 29, presents a well marked example of this strange and rather rare disease. He is a great smoker, very nervous and restless, and has quite marked locomotor ataxia. His mother had chorea in childhood.

34. *Morphœa.*—Miss B., aged 10, is a very nervous child, restless at night and subject to nervous headaches. Her father is of a very nervous temperament and has neuralgia, as does also her mother. She has four or five spots of hardened white skin about waist and thighs, which have steadily increased in size, with the new formation of others, for more than a year. They appeared to be arrested for a time, with daily applications of a moderate faradic current of electricity.

35. *Elephantisis Græcorum.*—Mr. O., aged 30, presented markedly the features of the macular form of anæsthetic leprosy. Nervous sensations of tickling, pain, and burning were very common.

It were possible to multiply the number of cases very largely, but these will be quite sufficient to illustrate this division of the subject.

5. *Conclusions.*—From what has been thus far stated in this and the preceding article, it may reasonably be concluded that the nervous system has much to do with the causation of skin diseases. But on the contrary, there has been much evidence given that the term neuroses of the skin, as heretofore used by writers, has been both too extended, embracing too many affections, and yet too limited, including too few. To be more explicit, it has been shown in the preceding paper that the cells of the rete Malpighii are intimately connected with the nerve terminations; it has been shown that there are many physiological facts pointing in the direction of neuropathy in skin diseases; it has been shown that irritation of the nerves, as by injury or disease, will cause cutaneous lesions; finally, it has been demonstrated that very many of the affections of the skin have varied and many neurotic associations.

But while these facts exist, it is likewise true that not every

nerve lesion will be followed by integumental disease, nor will every neurotic person suffer from these maladies. There are other factors in the case. While I have alluded to nearly a dozen cases of eczema, where mental and nervous connections seemed manifest, fifty times the number could more easily be cited where no such relations could be traced; for each of the few cases of acne related as illustrating nerve influence, a hundred stand ready to prove negatively that such is not necessary, or at least cannot be shown in any proportion of the cases; and so on for the other diseases quoted.

These facts go to show that the time has not yet come, when we can distinctly draw any line with certainty, and say that such and such diseases are neurotic, and these others are not. Cases are neurotic, but diseases of the skin cannot be as definitely stated to be such. Now, while I know full well, and have already mentioned in the previous paper, that most remarkable alterations have been discovered, *post-mortem*, in the nerves and ganglia of the territory occupied by an eruption of herpes zoster, and would, therefore, be inclined to make that a true neurosis, around which, perchance, we may as time rolls on be able to construct a class of neurotic affections of the skin, I cannot at present feel justified in separating the neuroses from other skin lesions without including eczema, whose neurotic elements of burning and itching are so painfully thrust upon our notice every day. The true nerve alterations connected with it have not yet been demonstrated, it is true, but do they not exist?

When we attempt to construct the class of neuroses of the skin from a pathological standpoint, we are met with the fact already developed, that *many and varied* cutaneous affections have been actually observed to follow crushing and other injuries or disease of the nerve termini, trunks or centres. Thus, erythema, the glossy skin, nail alterations, eczema, herpes, urticaria, papillomatous growths, ulcerations, bullæ of various sizes, hyperæsthesia, analgesia, and anæsthesia, itching, burning and pain, hypertrophy, and alteration in perspiration and hair growth. Now all these have been actually observed by competent men, to follow and depend on nerve influence. Where can we draw the line without including all of them?

The conclusion seems evident that the direct control of the cell elements of the skin, which result at one time in healthy, at another in morbid action, resides very clearly and definitely in the nerve elements distributed to and among them. Further, that, in proper subjects, an *irritation* of nerve tissue results in disease of the parts to which it is applied. It must be remembered, however, that in the laboratory physiologists have failed to obtain these lesions from artificial irritation and sections, and we must also believe that during war multitudes received nerve injuries that were never followed by skin lesions.

But still, again, the occurrence of these very same lesions, without any direct appreciable nerve influence, such as injury, etc., must lead us to enlarge our view and look at these affections not only from the neurologist's or dermatologist's standpoint, but with the far-embracing consideration of the thorough physician. Doing this I believe we will find two very important causes of skin diseases; first, *reflex nerve irritation;* second, *direct nerve irritation.* The first, *reflex influence,* is shown *inversely* in the occurrence of intestinal ulceration attending extensive cutaneous burns; *directly,* in the flushing and heat of the surface, or paleness and perspiration, caused by the presence of certain articles in the stomach, also by mental, or nervous states, as severe neuralgia; or this reflex influence is further shown in the pruritus and even urticaria following certain ingesta, the cutaneous symptoms being often relieved at once by an emetic. Likewise in the pruritus of pregnancy, or in the herpes gestationis, both of which cease on emptying the uterus.

The second method of production of skin lesions, direct nerve irritation, is less easily demonstrable. It includes, among others, the skin lesions found in herpes zoster, leprosy and syphilis; also in gouty patients, or in those in whom the results of mal-assimilation are less strongly marked than in gout, the subjects of oxaluria, lithæmia, etc. With these may be placed those where ingesta produce an eruption some time after taken, as, in certain subjects, strawberries, pineapples, shell-fish, etc., always excite an eruption, likewise iodide of potassium, chloral and other medicinal agents.

Now, tar, iodide of potassium, buckwheat and other substances

will produce acne; but so also will a tumor or displacement or ulceration of the uterus, all acting through the nervous system, the former *directly*, as far as we can at present tell, by the circulation through the blood vessels of irritating matter; the latter, by the constant irritation of the uterus being *reflected* to the skin. So of urticaria, so of eczema. Inflammation of the spinal ganglia, we may grant for argument, causes the formation of a cluster of bullæ, which we call herpes zoster, but almost the same effect may be produced by an agent acting locally, excessive heat, irritants, as cantharides, etc.; or finally, certain substances taken internally can excite an eruption of bullæ, as iodide of potassium. Of the causation of the pemphigus we know but little, but it may be due to the syphilitic poison in certain cases; in the others is it a neurosis?

We know, further, that the circulation of certain effete products—as in lithæmia and jaundice—will engender pruritus of the integument, but we also know that the bite of the flea or mosquito, or the burrowing of the acarus, will do the same, as may also the impregnated or diseased uterus, or ascarides in the rectum. Lepra anæsthesia, perhaps the least contested of the nervous diseases of the skin, presents cutaneous and other phenomena which ofttimes resemble very closely those of syphilis; how do we know that these very lesions of syphilis have not for their ultimate cause alterations of nerve structure or function. These and many other points afford fertile fields for study and research, and until much more is known on the subject, especially in the way of pathological changes in nerves and ganglia supplying diseased skin, we are hardly prepared to isolate a few cutaneous diseases, whose nerve phenomena are perhaps more obvious than those of others, and call them neuroses.

6. *Therapeutical Considerations.*—Fortunately, however, this apparent uncertainty does not make the indications for treatment any less definite and sure, but on the contrary may often lead to more successful measures. I have endeavored in this and the preceding paper to show that all cutaneous affections, except certain ones manifestly local, as the parasitic, have much of nerve element, and our therapeusis will be followed by success in proportion as we pay attention to all the elements of a ca se. I

have elsewhere* shown the very great frequency of urinary derangements in skin diseases, as indicative of disordered blood-current. Our treatment, then, of skin diseases, as far as their nerve elements is concerned, resolves itself into three divisions: 1, remove irritating agencies; 2, employ such measures as soothe already excited nerves; 3, secure a proper vitality and tone of the nervous system. It were senseless to give arsenic or anything else internally, or employ emollient washes or ointments externally to relieve the itching or scabies while the insect was still left to burrow; quite as useless to expect relief of general or local pruritus by such measures while a cause such as lithæmia, jaundice, glycosuria, uterine disease or the like remains.

The first point then is to search for and remove the exciting and continuing cause, be it the flannel next to an easily inflamed skin, (causing eczema, urticaria, or pruritus,) or any external irritant, or assimilative, or other error irritating the nerves from within.

Second, soothe already excited nerves, it may be by alkaline baths, or quieting lotions, ointments or powders, or administer, if need be, internal remedies, as chloral, bromide of potassium, belladonna, etc. Chloral is often of great service, given in a tolerably full dose, half an hour before undressing, where there is much pruritus, to allay the great irritation from friction of the clothes and exposure to the air.

Third, the vitality and tone of the nervous system, and the proper performance of its functions, are to be obtained by all known means. If prolonged mental strain originates and keeps up an eruption, as in some of the instances cited, relief to the former must be had if we would help the latter. Cold baths especially of sea-water, change of scene, proper recreation and exercise, are well-nigh essential in many cases. In those cases of skin disease where there is functional nervous disorder, inherited or acquired, the medicines known as neurotics are most serviceable, and it is in these cases, as Dr. Allbutt remarks in his excellent article quoted, that arsenic is certainly and regularly efficacious. The great diversity of opinion as to the value of arsenic may thus

* Transactions of N. Y. State Medical Society for 1875.

be accounted for. But there are other remedies very efficacious in neurotic skin cases, and these are strychnine, quinine, iron, and phosphorus.

In conclusion, we shall, I think, obtain a much larger measure of success in treating skin cases, if, while we really discard the class of neuroses as separate and distinct from other affections of the skin, we still bear in mind the nerve elements of a large proportion of all diseases, including those of the integument, and regulate our therapeusis accordingly.

TWO CASES

OF

EXOPHTHALMIC GOITRE,

ASSOCIATED WITH CHRONIC URTICARIA.

URTICARIA has for some time been regarded as a neurosis of the skin, but the positive evidence in favor of such an opinion in regard to the ætiology of the disease has heretofore rested wholly upon a few clinical phenomena. The sudden formation and disappearance of the wheals, the often periodic character of the disease, and the absence of any true histological lesion, except the œdematous swelling of the epidermis and upper portion of the papillary layer, have seemed to indicate but a transitory disturbance in the blood supply, which Auspitz,* after studies on the cutaneous circulation, thinks is produced by the reflex transmission of an irritation from sensitive to vasal nerves, an opinion already expressed by others.

Going a step further, we have neural influence in urticaria exemplified in those cases† where other forms of nerve disturbance are observed in the same individual. Thus, to quote some instances recently recorded by Dr. Clifford Allbutt: "Mrs. H. belongs to a highly neurotic family. Is liable to intense migraine and to gastralgia. Is a 'terrible martyr to urticaria.' Miss C. consulted me for obstinate neuralgia. Her brother came to me a few months later, complaining of a curious and obstinate form of urticaria.

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* *Archives of Dermatology*, vol. I., No. 4, p. 333 (*Vierteljahr. f. Derm. u. Syph.*, 1874, p. 311).

† *The Practitioner*, Nov., 1874, p. 323.

He himself is of very nervous temperament and has migraine. Mrs. S. has spasmodic asthma and urticaria. Two of her children have eczema."

Yet another advance in the neuro-pathology of urticaria is made by Charcot* in connecting this disease with sclerosis of the posterior columns of the spinal cord, or locomotor ataxia. He mentions the case of a woman treated at Saltpétrière, where enormous patches of urticaria appeared with each accession of the pains, and just over the spots where most pain was felt. Gailleton† also gives an interesting case of ataxia with attendant urticaria for many months, as follows: A woman, aged 32, of good constitution, had for a year failure in co-ordination of movements, a characteristic gait, feebleness of the arms, darting pains in the limbs and along the vertebral column, the sensation of constriction at the waist, and pricking in the hands and feet. Six months after the commencement of the disease, strabismus and facial paralysis occurred, which have disappeared spontaneously. At the time these appeared the patient complained of sharp cutaneous pain, and numerous patches of urticaria appeared on the arms, thighs, neck and trunk. These urticarial *plaques* lasted individually but a few hours, but were reproduced with great rapidity on different parts of the body, and were accompanied with most distressing pruritus. The eruption persisted for nearly a year.

Exophthalmic goitre, Graves' or Basedow's disease, is now pretty uniformly looked upon as a nervous affection, a functional, or possibly structural disorder of the sympathetic. It were out of place here to discuss its manifestations or nature, and the two following cases serve to illustrate quite fully the leading features of the disease without further introduction. The symptom of urticaria is one that might readily be expected from the nature of the disease, and I am led to contribute these cases as furnishing another link, which I deem very important, in the chain of evidence connecting urticaria with nerve disturbance. Cases of this disease in the male are also com-

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* *Leçons sur les Maladies du Systéme Nerveux*, 1872, 1873, p. 68.

†*Traitè Elèmentaire des Maladies de la Peau*, 1874, p. 286.

paratively rare, and the first one, from the completeness of the history, may be of value.*

Case 1. Thomas M., aged thirty-one, a gilder by occupation, not married. When about fourteen years of age he was apprenticed to a gilder; previous to this he had been healthy, with the exception of occasional headache, which he ascribes to a fall he received when a boy. As an apprentice, he was obliged to work very late at night, sometimes until one of two o'clock in the morning, working also on the Sabbath. In busy seasons he would often work thus for several weeks in succession. It was occasionally necessary for him to lift and carry heavy weights. During his apprenticeship he often noticed having palpitation of the heart, coming on and disappearing at times. Three or four years ago the palpitations gave so much trouble that it was with difficulty that he could walk up stairs, and they would often start him out of his sleep; these have continued more or less at times, and he was recently under treatment for them. While an apprentice, he as well as his friends, noticed that his eyes were at times "swollen," would appear strange, more so at one time than at another, recovering themselves between times; the left eye was more prominent than the right. For a number of years he has noticed that his collar at times has been too small for his neck, at other times it would be too large; he has wondered at this, but does not recollect noticing otherwise any swelling of the thyroid. About three years ago he was much troubled with noises, "like the sound of water," in the left ear; he has also had left hemicrania, lasting for several days, which would be relieved by lying on the affected side. He has had from time to time swellings of the face, quite transient, which would even make the eyes to appear sunken; these have occurred as recently as two months ago. Has also at times noticed temporary swell-

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* As a further contribution to exophthalmic goitre in the male, I may allude to another case in private practice, of which I have notes, in a man aged 52, where palpitations and ocular protuberance are the main features, the goitre symptom being very slightly pronounced. He has, however, never had any symptoms of cutaneous disorder traceable to the disease. These three are all the patients with Graves' disease which it has fallen to my lot to observe scientifically.

ings and puffiness of the hands and feet. Has been subject to diarrhœa and hæmorrhoids, but not to epistaxis. He gives the history of acquired syphilis about nine years ago, for which he was treated internally, and apparently cured; there are at present no traces, past or present, of the disease. He masturbated when a boy, but asserts that he has not done so for ten years; he then had frequent nocturnal emissions, never in the day. He has never been a hard drinker, uses beer moderately, has been drunk a few times. When an apprentice he chewed tobacco, but only for a year, since which he smokes, sometimes as many as ten pipes-full of tobacco, of medium strength, daily. When he has had the palpitations, the smoking has increased them, now it has the effect of making him sleepy.

Present condition. He is a large, well-developed man, about 5 feet 10 high, light complexion and hair, blue eyes. Bowels regular, tongue slightly coated and pale; eats and sleeps well now. Pulse 84, varying somewhat on the quarter minute, being 19 at one and 21 at another, but no irregularity of beat can be made out. Most careful examination of the heart fails to detect any enlargement, nor does the stethoscope reveal any abnormal sounds. There are no pulsations, tremor or thrill over the large vessels of the chest or neck, or over the thyroid body. Lungs healthy. But slight enlargement of the thyroid can be felt, though the whole neck appears rather large. The eyes present a very characteristic appearance, the *stare* is evident on entering the room. Both eyeballs protrude, the left very markedly so. The upper eyelids follow the eyes fairly when the patient looks down, but the lower lids do not follow the eyes when looking upward; much of the sclerotic is seen below, and the appearance differs much from that of healthy eye-movements, placed in comparison. He has but little control over the right eye; he can with difficulty leave the right open to any extent when closing the left voluntarily. The pupils respond perfectly to light, and are symmetrical. At night he has flashes of light, both with the eyes open and closed; has at times seen objects double, but now sees but one image. The vision of the right eye is normal; with the left (most affected) eye there is a blurring at a distance of three feet. He was formerly annoyed much from suffusion of tears

when looking at an object for a length of time, but this has passed away.

About a month ago he began to suffer from urticaria, which has continued and increased in severity. At present there are urticarial wheals on the legs, arms and trunk, exhibiting all the characteristics of the ordinary disease; the eruption is not very abundant, but the distress is considerable and the wheals are continually being formed anew. When the body is stripped, and the skin rubbed quickly and firmly with the point of a blunt instrument, as the end of a brass door key, the skin is quickly reddened, and shortly elevated ridges appear, which soon pale and resemble lengthened wheals.

The urine presents no striking anomalies; morning and night specimens moderately acid; both have a specific gravity of 1.020; rather abundant mucous deposit, and a few amorphous urates in each. At no time during his visits has the pulse ranged over 93; there are some irregularities, the quarter minute giving successively 25, 22, 24, 22 beats.

Case 2. Mrs. —, aged 45, was delicate and sickly when a child. Was married at 18 years of age, but separated from her husband after 4 months; she had a miscarriage at 3 months, and has never been completely well since. She is of full habit, bowels and menses regular, tongue coated, pulse 84 weak; has had chronic rheumatism.

The history of the Graves' disease dates back a number of years—at least five years previous to my seeing her. This diagnosis was made by a prominent oculist whom she consulted about the projection of her left eye. She has been treated much of the time ineffectually by various physicians, remaining with each long enough only to experience more or less benefit, and then changing. The eyes exhibit clearly the peculiar appearance of patients with exophthalmic goitre, the left one being more strikingly prominent, and being of but little service for vision, she soon losing control of it. The other phenomena of the disease have been present for some years—irregularity of the heart's action, and at times severe palpitation, and enlargement of the thyroid—but this is not so very marked.

Five years before coming to me she experienced a severe

nervous shock, and dates her skin trouble from that period. She states that she has not perspired since. She began then to have "a fine rash and redness all over the body," and itching. This continued about the same, off and on, for four years, when, after being weak and exhausted, and having various hysterical difficulties, the itching became more general, and an eruption corresponding to that now existing appeared. Lumps would form on the forehead and on various parts of the body; sometimes the face and head would appear greatly swollen.

When first seen she was in a pitiable state of nervous anxiety: the itching of the feet and toes and sometimes of other parts of the body she described as agony. At the first visit there was not so much to be seen on the skin, but there were a few urticarial blotches on various parts of the body and limbs. While under observation, however, she had several acute attacks of skin trouble, all of the same sort. On one occasion she woke with the upper lip greatly swollen, and with swellings on various parts of the body. On the following day, when seen, the whole face was swollen and puffy; on the middle of the forehead there was a large erythematous lump, also one beneath the right eye, and smaller ones about the face. The hands were swollen; on the right hand near the little finger, there was an erythematous patch, somewhat swollen and with two small vesicles on it. There were also various erythematous and urticarial blotches about both hands and wrists; and on the back of the left hand, near the thumb, there was a red spot with the skin broken, as if the seat of a former vesicle. The whole surface of the skin burned as if scalded or scratched; there was no pain on deep pressure. On another occasion, a day or two after there had been, according to her statement, numerous swellings on various parts of the body, the remains of several were visible on the right cheek, and on the arms there were numerous stains, some of them quite dark, as if the parts had been bruised—the remains of the lumps; the hands and arms were manifestly swollen, and there were urticarial wheals on the limbs and body.

REMARKS.

After very considerable search, not only in the literature of skin diseases, but also in that relating to ophthalmology and general medicine, the journals and Hospital Reports, I can discover nothing similar to the cases above given, and I find but four allusions to any relations of the disease in question, exophthalmic goitre, to cutaneous changes. Trousseau* says, "I have noted besides, in this woman, a symptom to which attention has not yet been called, and which I should like observers to look for, namely, the *cerebral macula*. If the epidermis be slightly irritated, after two seconds at most, a beautiful red stain is seen, which lasts nearly a minute. I can hardly believe that there is not, in this case, very marked *asthenia of the vaso-motor nerves*, in consequence of which the capillaries dilate rapidly, easily and persistently under the influence of the slightest irritation, just as happens in cerebral fever and in some ataxic cases of typhoid fever." Neumann,† when describing urticaria, says, "The efflorescences of urticaria have a resemblance to the elevations of erythema nodosum, and *to those œdematous swellings which appear in connection with Basedow's disease, or exophthalmic goitre*," giving Stellwag as authority for the latter allusion. I am unable to find any reference to this.‡ The two other references to any skin symptoms in exophthalmic goitre relate to pigmentary disorders, and are as follows:

In one of the cases recently reported by Bartholow,§ a lady aged 54 had, for about 15 years, some of the symptoms of Graves' disease, and during the last year pigment deposits occurred about the neck and sternal region, and on the hands. "The skin of these pigmented spots is rough, and gives off fine furfuraceous scales; they are surrounded by abnormally white integument."

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* *Lectures on Clinical Medicine*, Philadelphia, 1867, vol. I., p. 558.

† *Lehrbuch der Hautkrankheiten*, 3d edit., 1873, p. 156.

‡ Stellwag—*Treatise on Diseases of the Eye.* Hackley & Roosa, New York, 1868, p. 437.

§ CHICAGO JOURNAL OF NERVOUS AND MENTAL DISEASE, July, 1875, p. 351.

Raynaud * gives four cases of Graves' disease where there existed on the skin the peculiar discolorations known as *leucoderma* or *vitiligo*, and quotes another case from Trousseau.† All these cases were in young females, the ages of four of them being given, respectively, 20, 25, 24 and 25 years. In three of Raynaud's cases the state of the skin is carefully described, so as to leave no doubt as to the diagnosis of leucoderma. In his last case, and in Trousseau's, it is simply stated that vitiligo was present. In the first of Raynaud's cases, the one most accurately described, the discolorations existed only on the back of the neck; in the second on the neck, arms, legs and breast, with a zone of the disease around the lumbar region, irregular in outline; in the third case, and in that of Trousseau, the location of the vitiligo is not given; and of his last case he says, "the patient presented on the legs patches of vitiligo which encircled them like two garters." The exophthalmic goitre was marked in these cases, and in three of them was accompanied with epileptiform convulsions at times. In one of the cases Raynaud states that he looked for the *cerebral macula* of Trousseau, to which I have alluded, but was unable to obtain the reddened lines on irritating the skin with the nail.

There can be no doubt but that the state of skin described by Trousseau in his case of exophthalmic goitre was the same as observed in the case I have given first, and the "œdematous swellings" which Neumann accredits Stellwag with having noticed in these cases, correspond to the changes I have recorded in the second case. That the skin lesions I observed in both cases properly belong under the head of urticaria, I have no hesitancy in affirming very positively; and I feel very confident that these states of the skin will be seen oftener, if searched for, in cases of exophthalmic goitre.

In looking for an explanation of the occurrence of this lesion of the integument in these cases, a very ready and plausible reason presents itself. As I mentioned at the beginning of

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* *Archives Générales de Médicine*, June, 1875, p. 679.

† *Clinique Médicale de l'Hôtel Dieu de Paris*, tome II., p. 575. I find that Trousseau's words "plusieurs taches de *vitiligo*" are translated "freckled in some parts," in the Sydenham Society's edition of his work, Philadelphia, 1867, vol. I., p. 569.

this article, the clinical phenomena of urticaria are *neurotic*, and its lesion can be explained on no other grounds than capillary disturbance, having its origin in some derangement of nerve influence.* I have traced it as associated with other symptoms, commonly reckoned as *neurotic:* migraine, gastralgia, neuralgia and "nervousness;" next, it was found associated with lesions of the *spinal cord*, as in sclerosis of the posterior columns, in locomotor-ataxia; and now, in these two cases, we find it associated very directly with disease, functional or other, of the *sympathetic*, for such, in our present knowledge, we must regard the complex phenomena of Graves' disease, or exophthalmic goitre.

I have elsewhere, quite recently,† endeavored to show that very many skin diseases possess nerve elements of great importance, and argued against the propriety of making a separate class of neuroses of the skin, as liable to mislead in practice, and said that while on pathological grounds I would be inclined to "make herpes-zoster a true neurosis, around which we may, as time rolls on, be able to construct a class of neurotic affections of the skin, I cannot at present feel justified in separating the neuroses from other skin diseases without including eczema, whose neurotic elements are so painfully thrust upon our notice every day. The true nerve alterations connected with it have not yet been demonstrated, it is true, but do they not exist?" Nor do I yet yield urticaria solely to the class of neuroses, although next to zona it has had its nerve elements best demonstrated; and pathological evidence of change in nerve structure seems alone to be wanting to render its position absolutely certain. But when we consider it more closely, I think the clinical and therapeutical elements of this disease will separate it widely from herpes-zoster, where the skin lesion appears to depend so clearly on nerve and ganglionic inflammation.

We know urticaria to occur from irritating ingesta, in which case the nerve agency is probably a direct one reflected from

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* I am aware of the theory of spasm of the cutaneous muscles, but cannot find any plausibility in it.

† *Archives of Electrology and Neurology*, Nov., 1874, and May, 1875.

stomach to vaso-motor nerves; in like manner Scanzoni* has recorded some highly interesting cases where it was produced by the application of leeches to the uterus, and it is quite possible that other cases may occur from the irritation of some other organ, as the bladder; possibly some of the obstinate cases are due to rectal troubles, as worms, ulcerations, fissures or hæmorrhoids, giving rise to irritation. But we know urticaria also as coming from true digestive disorders, as in a case of Lallier's,† where fish eaten for breakfast produced no eruption till 6 o'clock in the evening, and then there was no other disturbance, no nausea or vomiting. The urticaria, there, was the result of the circulation of some wrong elements of food, and was not a primary reflex affair from the stomach. Dr. Maclagan‡ found a deficiency of urea excreted by a patient with chronic urticaria; the urea and uric acid were augmented many-fold and the patient cured, by means of colchicum. Then again we have urticaria apparently due to malarioid disorder, as in the intermittent forms, and these quinia and arsenic cure. One would err greatly, I think, in ranking urticaria among the neuroses in the same manner in which we rest zona, with its inflammation of the nerve ganglia and infiltrated nerve sheaths; but that urticaria possesses nervous features of very great import is undeniable, and not the least remarkable and interesting of these is the one to which I have called attention, namely, its connection with exophthalmic goitre.

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* *Edin. Med. Jour.*, Oct., 1860. Jones—*Functional Nervous Disorders*, 1864, p. 463.

† Wilson—*Lectures on Dermatology*, 1873, p. 109.

‡ *London Lancet*, (Am. Reprint) Oct., 1846, p. 366.

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A CLINICAL STUDY ON HERPES ZOSTER.

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FOREMOST in the rank of diseases affecting the skin, which may with measurable propriety be attributed to the influence of the nervous system, stands herpes, in its various forms and phases, and, central in the entire group, herpes zoster, zona, or shingles is recognized as intimately associated with direct lesions found *post-mortem* in the nerve elements related to the portions of skin affected. I will not do violence to the knowledge or experience of my readers by entering either into the ordinary clinical history of, or the microscopical conditions observed in this interesting disease, which are familiar to all, but will at once proceed with the history of a case of herpes zoster, which exhibits certain interesting and unusual features, and which has given rise to the thoughts herewith presented. I will reserve for another occasion a discussion of the varieties of herpes and their relations to each other.

I may premise that perhaps the most interesting feature, to many, in the case presented, is the history of the large glandular swelling in the neck on the same side as the herpes, and its rapid and complete disappearance under the internal use of arsenic. For the notes of this portion I am indebted to my friend, Dr. V. P. Gibney, under whose care the patient was at the time, and who kindly referred him to me on the appearance of the skin lesions.

John M., aged 73, on September 3, 1875, presented an extremely emaciated appearance, and exhibited an enormous tumour, located in the right cervical region anteriorly, extending from the angle of the jaw downwards, overlapping the clavicle; laterally it reached from the median line (at the pomum Adami) to within an inch or so of the acromion process. It was hard to the feel, the integumental covering was markedly discoloured, and the veins running through it large and tortuous.

The history was that it began almost imperceptibly, no cause being known, and was of comparatively recent origin; he was living in a damp basement, and the hygienic surroundings were lamentable. The case was sent to Dr. Frank Hamilton, who considered it a malignant growth, inclining strongly towards the diagnosis of "lympho-sarcoma." Removal was contra-indicated, he thought, by the age of the patient (over 70), his [illegible]ched cachexia, and the unfavourable habitation. It was agreed to [illegible] internally, and a change of residence was urged. He

received the liquor potassæ arsenitis, five drops thrice daily. On October 18th, six weeks and a half later, he was seen for the second time, and the change in his condition was so great that he was hardly recognized by Dr. Gibney. The tumour was at least three-quarters smaller, the general health good, and the old man seemed rejuvenated. He had taken the Fowler's solution regularly, and had recently succeeded in moving out of the basement to a floor above ground. The arsenic was ordered to be continued, and seven weeks later, December 8th, he again called and stated that the tumour had been gone for six weeks, and that he had discontinued the use of the arsenic since Nov. 1. It was then difficult to detect even a trace of the tumour. At this visit he called attention to the herpes zoster occupying the right arm, and was recommended to my care.

I find on my notes of the case that he appeared to be at that time rather uncommonly active and well preserved for one of his years, and that very careful examination failed to detect any tumour on its former site, but that there appeared to be a very slight thickening over the extent, perhaps, of two inches just about the centre of the space between the ear and the acromion process of the right side; this gave rather the feeling of a fatty deposit just beneath the skin, but not of any very great thickness.

The arm of that side (right) was the seat of a very abundant and rather peculiarly arranged eruption of herpes zoster. The chest, front and rear, was entirely free from eruption, there being not even any red or tender spots, sometimes the evidence of aborted eruptions—the surface of the thorax was healthy. The eruption began at the back of the shoulder, but quite low down, at least an inch and a half below the end of the humerus, and at about the same point, or a little lower down, on the anterior aspect of the arm. The groups here and elsewhere were pretty thickly set, and the inflammatory action was severe, as the vesicles here and also on the arm were large and flat, and many of them had run together, forming large, flat, bullous masses. The eruption wound around the arm, from behind forwards, in a band of about two inches in width, following closely the course of the cutaneous branch of the musculo-spiral nerve. Passing thus around from the back to the front of the arm, the lower portion of the upper arm, and the entire anterior and outer aspect of the forearm were covered with two or three bands of vesicles, irregularly traced and often touching, so that about one-third of the entire circumference of the limb was covered by the eruption.

Upon the hand the disease occupied also the radial aspect and extended down even to the tips of the thumb and forefinger; the pain in the thumb was so great as to keep the patient from sleeping. The eruption appeared to be in about the fourth or fifth day, and the clinical history corresponded to this. The patient was given phosphide of zinc with nux vomica, and did well; but the further history of the case does not concern us at present.

A careful study of the distribution of this eruption as here recorded, in its relations to the distribution of the cutaneous nerves of the part, renders the conclusions inevitable that there must be some connection between the two. I am aware, of course, that the observation of a relation of the location and arrangement of the skin lesions of herpes zoster to distribution is no new matter, but the observations in regard t
*mis*take not, have hitherto been drawn largely, if not enti-

distribution of the eruption on the chest, abdomen, and head, where the nerve tracts are more evident. In tracing it in this instance on the arm it is with the further view of seeking an etiological factor in the case before us, and of assisting thereby in a study of the etiology of the disease.

A comparison, then, of the distribution of the eruption with that of the cutaneous nerves, as given by Gray and Sappey, shows that the lesions were entirely confined to the regions innervated by the circumflex, musculo-spiral, musculo-cutaneous (or external cutaneous), median, and radial nerves. Thus the integument of the upper part of the arm, front and rear, up to within a short distance of the head of the humerus, is supplied by the circumflex, in its anterior and posterior branches, over which were groups of vesicles; a band of vesicles followed directly the course of the musculo-spiral nerve, twisting around from behind forwards; the mass of the eruption on the arm and forearm occupied the tract of the external cutaneous nerve along the anterior or radial aspect of the limb, even on to the thumb, which receives cutaneous filaments from this nerve; finally, the radial nerve sends branches to the skin of the back of the thumb and forefinger, and the median nerve to the inner surfaces of the same, all of which parts were also sprinkled with vesicles. These latter parts were the seat of the most pain, which was here very severe.

Tracing now these nerves to their origin, we find the musculo-spiral (from which the radial nerve is given off) and the circumflex nerves coming from the posterior cord of the brachial plexus, and the musculo-cutaneous (or external cutaneous), together with the median nerve, is formed from the outer cord (the median receiving also a branch from the inner cord). These two cords of the brachial plexus, the posterior and outer, are further found to be composed mainly of the fibres of the *upper of the two primary cords*, of the plexus (although the posterior cord receives also a branch from lower main cord); finally, this *upper* main cord is seen to be made up of the 5th, 6th, and 7th cervical nerves, the lower main cord being formed from the 8th cervical and 1st dorsal. Now there was no eruption upon the course of the nerves which are derived wholly from the *lower* main cord, the ulnar, and the internal cutaneous, and we trace, therefore, the eruption in this case to the *upper* of the two main primary cords of the brachial plexus, which we have found to be composed wholly of the 5th, 6th, and 7th cervical nerves (with a small fasciculus from the 4th cervical). Thus we are enabled to locate the nerve lesion somewhere about these large trunks or in the main cervical nerves, namely, the 5th, 6th, and 7th of the right side.

Turning now to the tumour which had occupied this patient's neck, on the same right side, we find that it extended from the angle of the jaw downward, overlapping the clavicle; laterally it reached from the median [illegible] one inch of the acromion process. It was hard to the feel, the skin was tense over it. There can be little

oubt from the description and history of this tumour that it was connected in some way with the lymphatics; indeed, the opinion of Dr. Frank Hamilton was probably correct, that it was a lympho-sarcoma. I am the more strongly inclined to this opinion from the report of four similar cases by Tholen,[1] three of which, like this, were successfully treated by arsenic internally, in a manner previously employed by Billroth in two cases. Two of Tholen's cases resembled mine very closely; in the first one the tumour in the neck was so large as to interfere with the movements of the jaw. After six months' treatment with Fowler's solution, in from three to five drop doses, with occasional hypodermic injection of ten drops of the same into the tumour, it had entirely disappeared, and there was no return after two years. The second case was treated similarly, and in five months regained, nearly, its normal contour. In the third case a large bunch of glands in the supra-clavicular and axillary region yielded to arsenic at the end of two weeks, and subsequently disappeared entirely. Tholen states that benign lymphatic tumours in the neck treated in this way were not altered.

Now the deeper lymphatics are in very intimate relation with the deeper vessels and nerves, and those in the neck, which appeared to be most implicated are in very close proximity to the cervical nerves, especially the 5th, 6th, and 7th, which, as we have seen, are the ones supplying the parts to which the eruption of zoster was distributed; and the whole tumour, further, overlapped and pressed upon the upper part of the brachial plexus. I would, therefore, advance the opinion that pressure upon these, or alteration in some manner, or their irritation by the tumour, was the cause of the subsequent development of the zoster upon the arm.[2]

In studying the anatomical relations of the disease in this case, it first occurred to me quite strongly that the cause might be a disturbance of the sympathetic nerve, which sends communicating branches to the brachial plexus, as the middle and lower cervical ganglia of the sympathetic are situated just where pressure could be exerted by the tumour, but reflexion has made me exclude this element for reasons which will appear later, mainly, however, from the fact that the eruption of zoster has hitherto been conclusively proven to be in relation with the spinal nerves, and as they are also in a situation to be injured by the tumour in this case, they alone must be chargeable etiologically.

It can, of course, be objected that the eruption of zona did not occur

[1] Arch. für Klin. Chirurg. vol. xvii. Practitioner, Oct. 1875, p. 298.

[2] Lest it should occur to any that the herpes was *due to the arsenic* which this patient had been taking, as some writers have suggested, reporting cases where zona has appeared while using this drug, I would remind them of the far larger number of cases of shingles in patients who have never taken arsenic, and would say that my patient could hardly be considered to be under its influence, as he had taken none for full five weeks previous to the development of this eruption.

until the tumour had undergone absorption, and that, therefore, the latter could have had no effect in producing it. But it is quite possible that the active and rapid process of absorption of so large a tumour, for it had very largely disappeared after forty-five days' treatment, may have induced inflammatory changes in the parts which had formerly been compressed by it—the step between the absorptive process in a new growth and active inflammation is shorter than we are wont to realize.

Most of the observations heretofore published in regard to the etiology and pathological changes in zona have pointed to inflammation of the spinal nerves *near their origin*, and to inflammation of the *spinal ganglia*, and of the Casserian ganglion in cases of ophthalmic herpes, so that the ganglia have come to be looked upon as the *primary* seat of disease in this affection. But that this is but a single point from which to view the pathology of this interesting eruption is, I think, very evident upon study, to make which clear I will briefly allude to some facts to which I called attention, and some references which I quoted in an article some time since,[1] on "The relations of the nervous system to diseases of the skin."

Danielsen found the sixth left intercostal nerve, in thoracic shingles, swollen and reddened by a firm infiltration of the neurilemma, extending largely to the cutaneous branches of the nerve; the medullary portion was normal. Bärensprung found the intercostal nerves thickened and injected, and the same general condition has been noted by several other observers; and Haight gives a drawing of a microscopical section of a nerve in herpes zoster showing cell proliferation in and around the neurilemma, the nerves swollen, the medullary substance softened, and the axis cylinder eccentrically displaced. Charcot and Cotard found neuritis of the *cervical plexus* and corresponding ganglia of the posterior roots in a case of zona of the neck.

While, therefore, a number of post-mortem examinations of patients with ophthalmic herpes have demonstrated that the Casserian ganglion is in a state of inflammation, is of a grayish-red colour and succulent, and while in some reports concerning zoster in other regions the spinal ganglia are stated to have been inflamed, I would at the present time direct attention rather away from the ganglia to the nerves themselves, which many, if not all, the examinations have likewise shown to be the seat of inflammatory changes between the ganglia and the diseased skin; the anatomical proximity may, perhaps, in the case of ophthalmic herpes, account for the more frequent involvement of the Casserian ganglion. The weight of evidence seems to me to point to the cause of herpes zoster in a general neuritis

[1] Archives of Electrology and Neurology, Nov. 1874, and May, 1875. Where other references are not given the facts are quoted from this article and the references may be found in it.

rather than in a primary inflammation of the ganglia,[1] as the following facts show: 1. In cases such as that of Dr. Weir Mitchell's,[2] where severe brachial neuralgia is accompanied by herpetic eruptions, sections of the nerves which were performed for the neuralgia have shown them to have undergone certain definite changes; thus in the particular case referred to by Dr. Mitchell, "In very few of the rings of the secondary fasciculi could the axis cylinder be recognized, even with high powers, the individual nerve fibres being no longer clearly defined, but presenting a confused mass of concentric rings." 2. Cases are reported where other neural affections have accompanied, preceded, or followed herpes zoster in a manner which leaves little doubt that the eruption on the skin was closely connected with the other diseases. Thus, in two cases of shingles affecting the arm, Mr. Paget found the neuralgia to continue after the attack, and with it the fingers exhibited in a well-marked degree the features seen after an injury of the nerve, they became thin, tapering, smooth, hairless, glossy, pink, and blotched; in another case by the same gentleman necrosis and separation of a part of the jaw followed herpes of the right superior maxillary nerve. A number of instances are on record where paralysis has accompanied herpes zoster, affecting the muscles supplied by the nerves whose cutaneous branches innervated the affected skin. 3. Eruptions of herpes have been noted as following central nerve lesions, as after contusion of the vertebral column, in cancer of the vertebra, and in a case of pulmonary phthisis, with carious vertebra, where there was a collection of pus reaching into the sheaths of the spinal nerves; it has also been noted after fracture of the base of the cranium. Zoster has likewise been reported as occurring in connection with certain idiopathic diseases of the nerve centres, as chronic spinal meningitis, cerebro-spinal meningitis, locomotor ataxia, and apoplexy. 4th, and finally, zona has been frequently observed to follow very shortly after surgical operations, as M. Verneuil has particularly noted, and as has been well shown recently in a thesis by M. Picaud.[3]

I do not intend to question the fact that herpes zoster has to do with the sensitive nerves, whose fibres are ultimately gathered together and form the posterior roots of the spinal nerves, upon which are developed the ganglia, but only to indicate the improbability of a *primary* inflammation of the ganglion as a cause of zoster, unless, indeed, as before suggested, the ganglion becomes inflamed secondary to a neuritis (and this

[1] It will be observed that I use the term "*primary* inflammation of the ganglia," for I could not deny the post-mortem evidence that the ganglia are involved, but I believe it to be *secondary* to the neuritis, as lymphatic ganglia are inflamed in lymphangitis, although I know the simile does not hold good in every respect.

[2] Amer. Journ. Med. Sci., July, 1874, p. 26, and April, 1876, p. 321.

[3] Des Eruptions Cutanées Consécutives aux Lesions Traumatiques. A. Picaud. Paris, 1875.

neuritis may be from the effect of cold on the terminal filaments). The impression may be, then, supposed to travel backward towards the spinal column, becoming transformed in the spinal ganglion to a trophic nerve action, which latter is transmitted centrifugally along the same nerve bundle, and produces the inflammatory disturbance in the cells of the part to which it is distributed; the difference between the normal nutrition of the part and the abnormal excitation of disease exhibits itself in the disturbed or irritated and inflamed condition of the ganglion. The subject of the influence of the nerves on normal and abnormal nutrition, or trophic nerve force, is one of very great interest and of great obscurity, and is yet far from solution. I am not aware of this explanation, which has occurred to me from the present study, having been demonstrated to be untenable, and if it has been proposed by others I have not been able to find reference to it; it finds support in Kölliker's[1] description of certain nerve fibres which take their origin in the spinal ganglia and proceed centrifugally with the sensitive nerves, and go to make up the complete mixed spinal nerves.

A further confirmation of neuritis as a cause of zona is found in a remarkably peculiar case of this disease reported lately by Kaposi.[2] In this case the eruption affected the right arm of a woman, aged 42 years, and there had been four recurrences of the same (that is, five attacks in all) within a space of eighteen months (I see that he has still more recently recorded a sixth attack in the same patient). There were many unusual features in the case in regard to the seat, form, and development of the vesicles, etc., which I need not dwell on, but mention the case to make this single quotation: "In this case the brachial plexus in the right supra-clavicular fossa (the affected side) was swollen to the touch and painful to pressure, the pain extending along the inner surface of the upper arm to near the region of the elbow." The frequent returns of the eruption were probably due to a continued inflammation of the bundles of the brachial plexus, the cause of which we are of course as ignorant of as we are of the exciting cause of idiopathic inflammation or disease of any one organ or part of the body.

If, now, my line of thought and illustration have been clear, I trust that I have assisted in bringing forward prominently certain facts in regard to the etiology of herpes zoster but little considered hitherto, which, together with our knowledge respecting this disease, may be thus briefly recapitulated:—

I. Whatever may be the cause of the nerve irritation, herpes zoster is always of nerve origin, that is, it is an inflammatory lesion of the skin wherein the local cell action, resulting in the production of vesicles, is but

[1] Handbuch der Gewebslehre des Menschen. Leipzig, 1867. 5th Aufl. p. 316.
[2] Wien Med. Wochensch. Vierteljahresschrift f. Derm. u. Syph. 1874, p. 411, '75, p. 521.

a result of nerve influence, a perverted cell action caused by perverted innervation.[1]

II. From the almost constant changes found in the ganglia developed on the posterior or sensitive roots of the spinal nerves of the affected regions, we must infer that the trophic changes observed in the skin have to do with the sensitive nerves, which marks a certain advance in the study of the physiological relations of the trophic nerves or nerves of nutrition.

III. We are not to conclude, however, that zoster is the result of inflammation of the sensitive ganglia alone, for the entire nerve on the distal side of the ganglion has been always found to be inflamed, and abundant proof exists of eruptions of zoster due to various nerve lesions, peripheral and central, injuries and disease of the transmitting nerves and of the cord and encephalon.

IV. In certain cases the origin may be shown to be idiopathic inflammation of conducting nerves (as in Kaposi's case quoted), or they may be affected by pressure or other alteration caused by the presence of a tumour (as in the case given here), or the disease may be the result of surgical or other injury.

V. The origin, therefore, of herpes zoster is a direct nerve irritation and inflammation, and in ordinary, apparently idiopathic cases, the explanation of this is to be sought for in the same causes as give rise to neuralgias in general, some of which are traceable, many are not. The gouty habit, inducing neuralgia, can likewise give occasion to herpes; the direct exposure to cold of the terminal branches of a nerve, as in the head and neck or elsewhere, can cause painful excitation of the nerve itself, or neuralgia, and is equally a cause of zoster; malaria can originate neuralgia, and may not therefore some of the cases of zona be due to a malarial influence?—certainly the prompt action of citrate of iron and quinia in some cases might point to a malarial element.

VI. In considering, then, the true nature of herpes zoster we are rather led away from the skin lesion to the antecedent neuritis, whose manifestations are neuralgia, more or less marked, and disturbances of sensation in the area of nerve distribution, represented by hyperalgesia, hyperæsthesia, and anæsthesia, while at the same time other results of nerve disturbance may occur, as paralysis of muscles, trophic alterations in the tissues, and

[1] I do not deny the influence also of capillary congestion, but as normal nutrition is rather the result of a proper appropriating of the needed nourishment and a giving up of unneeded and effete elements by the cells of a part, so under abnormal innervation the amount of fluid called for by the cells contiguous to the bloodvessels is larger than is needed, and forms the vesicles; by a lowered vitality endosmosis of the cells of the skin is in excess, as is seen outside of the body in dead animal tissues. Vaso-motor action, being also a trophic affair, is undoubtedly likewise disturbed.

even necrosis and separation of bone. In other words, the eruption of zoster is an epi-phenomenon to a primary neuritis and neuralgia.

VII. The clinical history and therapeutics of herpes zoster are in themselves almost convincing proofs of the neurotic nature of the disease. In most cases, especially in younger patients, the treatment is purely expectative, while in severe cases and in elderly persons the neuralgia is the principal element requiring attention, and this is remedied by measures directed to the nervous system. In the majority of instances the nerve irritation or inflammation subsides spontaneously, the whole train of morbid phenomena occupying about the same length of time taken by other self-limited inflammations, as pneumonia and erysipelas, while under certain circumstances the *sequelæ* require attention, as in other diseases. The local destruction of tissue is sometimes a troublesome feature in the way of ulceration or necrosis of the skin, or the neuralgia persists to a distressing degree even under the most intelligent treatment.

VIII. Three therapeutic agents seem to have marked control over herpes zoster, whose cutaneous manifestations as well as painful element they appear to arrest. First, phosphorus, which, used in the form of phosphide of zinc, one-third of a grain with one-third of a grain of extract of nux vomica, every three hours, will pretty certainly *abort* the disease if given early as recommended by Dr. Ashburton Thompson.[1] I should presume that the tincture of phosphorus, or what is known as Thompson's solution of phosphorus, as now used so successfully for neuralgias,[2] would have the same effect. I have not tried them in this disease, but have used the phosphide repeatedly and with most excellent results. Second, electricity: the galvanic current passed directly through the affected nerves, their trunks and peripheral distributions, will have the effect of causing the eruption either to abort, if used early, or will make the newly formed vesicles dry up much sooner than otherwise, and will pretty certainly check the pain. Third, quinia with iron will, I think, if pushed early in the disease, shorten the duration much and relieve many unpleasant symptoms.

Whether ergot, which has been of great service in neuralgia in the hands of some, would check this congestive neurosis I cannot say, but should hope much from it. The hypodermic injection of morphia, as we know, relieves the neuralgia, and if used early and repeatedly, might abort the disease by checking the nerve-irritation, especially if conjoined with atropia. Painting the surface with collodion or colloid coating containing morphia would serve the same purpose—some assert that it is a very valuable measure. Ordinarily the only local treatment required is protection of the inflamed surface, and this is best accomplished by powdering

[1] Glasgow Med. Journ., Oct. 1874, p. 460. Braithwaite, July, 1875, p. 169.

[2] Transactions of the Amer. Neurolog. Assoc., vol. i. p. 224. New York, 1875.

it with starch and keeping a single thickness of mu
left on till the vesicles are dried.

In conclusion, I would, as a suggestive thought i
of the nerve relations of the disease in question,
affections, mention a remark of Handfield Jones, v
zoster:[1] "One can hardly avoid surmising," says h
of pleurisy with effusion the pathological action
pleurodynia with cutaneous vesicular eruption, onl
motor nerves are paralyzed, and not those of the i

[1] Journal of Cutaneous Medicine. London, 1868

ON HERPES GESTATIONIS:

A RARE AFFECTION OF THE SKIN, PECULIAR TO PREGNANCY.

By L. DUNCAN BULKLEY, M.D., New York.

(Read before the New York Academy of Medicine, February 5th, 1874.)

THE eruption, the history of which is here presented, differs materially from the forms of vesicular disease commonly known and described, but is of a character so distinct and yet so marked in each of the nine cases here analyzed, that it claims recognition and description among the cutaneous lesions liable to be met with.

I will first give the clinical history which furnishes my text, and let the other cases and commentary follow.

Mrs. J. H——, aged 32½ years, was confined with her first child in Nov. 1870. Two months previous to her delivery, an eruption began to appear, first and chiefly on the hands and feet, subsequently involving to a greater or less degree all the rest of the body, except the head. This eruption, which I did not see, is described as beginning in papules, which rapidly developed into vesicles, while, later, blebs were formed, especially on the feet about the toes and on the soles, of irregular shape and size, from one-half to one inch, or even more, in diameter; the vesicles, which were generally in groups, also varied in size from very minute elevations to the bullæ above described. After these had ruptured or were punctured they dried up, leaving only a brownish stain; there was at no time any exuding surface resembling eczema, and though the contents of the vesicles became turbid, the eruption could never be called pustular. The affection of the

skin was attended with intense itching, and after it had become extended was accompanied with much prostration and considerable fever, a pulse of over 100, and a temperature of 104° Fahr.

The disease did not seem to be affected by the most varied treatment which was employed for her relief, but towards the very end of gestation disappeared gradually, so as to be almost entirely absent on the birth of the child, after having lasted two months. One or two days after delivery the vesicles again made their appearance in a pretty general crop, which lasted for a few days and then dried up slowly, yielding at that time much discharge. During the eruption she was troubled with neuralgic seizures about the chest, which ceased with the cutaneous manifestations of disease.

After the disappearance of the eruption, subsequent to delivery, there was no sign of a recurrence for more than 2½ years, when she again became *enceinte*. In the interval, however, commencing several months after the birth of the child, she was subject to occasional and quite severe attacks of urticaria, which tendency lasted for about a year. The wheals would appear chiefly at the wrists when exposed to cold, also about the face, and frequently, coming to breakfast feeling perfectly well, the lips would suddenly swell with an erythema and remain so for half an hour. She had nursed the child but insufficiently for three or four weeks, and the milk then ceased.

When first seen by me, June 2d, 1873, she was for the second time pregnant, five months; in fair general health, pulse of moderate strength, 70, appetite good

except in the morning. She had retroflexion of the uterus.

About two weeks previously she began to notice an irritation of the skin of the hands and feet, which caused her to scratch the parts, when there would shortly appear little groups of vesico-papules, which were observed principally about the ulnar aspect of the hand and also running up on the arms; on the feet likewise similar elements were seen along the inner side and around the ends of the toes. In the former attack the disease seemed to develop mostly upon the inner surfaces. There is no family history of importance, neuroses being unknown; there is a little rheumatism.

The eruption was regarded from the first as an herpes, dependent upon reflex uterine irritation; and the history of the former attack, together with the futility of the treatment then employed, led patient and friends to anticipate prolonged suffering, relieved only after some months when the uterus should be emptied of its contents. She is ordered to avoid rubbing or irritating the parts where the eruption had already developed, or where it was about to appear, and, in place of scratching, bathe the parts whenever they itched with a wash composed of a teaspoonful of the "*Liquor picis alkalinus*" (℞ Picis liquidæ ʒ ij., Potas. causticæ ʒ i., Aquæ ʒ v. M.) in a teacup of water. Also directed to eat largely of oatmeal before retiring every night and ℞ Ferri et strychniæ cit. ʒ i.; quiniæ sulph. ʒ ss. M. Div. in pil. No. xxx, take one after meals three times daily.

June 13.—There has been some relief, but for the past few days the disease has been gaining, more vesicles

are developing, mostly in groups about the thumb and little finger and on the back of the hands; the palms are also sprinkled with partly formed vesicles whose fluid is just perceptible beneath the thick epidermis; the feet are very similarly affected, the limbs of the left side being worse than the others. Ordered to stop the pills of iron, strychnine and quinine, and take ℞ Potass. acetat. ʒ iv.; spts. etheris nitrosi, ℥ i.; ext. tarax. fl., ext. rumicis rad. fl. āā ℥ iss. M. Teaspoonful between meals in ⅓ glass water; and ℞ Chloral hydrat. gr. x. at night if necessary to insure not scratching. Puncture the vesicles very carefully by inserting a needle laterally at their base. She is up, and still attends to household duties.

June 16.—Patient has been more comfortable, the urine has been very free; there has been no new formation of vesicles until this afternoon, when she has been working in a very hot garret, directly beneath a tin roof, and is much prostrated therefrom. The burning and itching in the feet and hands is now unbearable, and the disease is developing with great rapidity, there being large crops of vesicles over the soles of the feet and on the palms, also around the nails and at the end of the toes. Pulse 64. Ordered to double the strength of the tar-wash, using ʒ ij. of the *Liq. picis alk.* to ℥ iv. of water, and apply thereafter, when dry, mutton-tallow to one hand, on trial. Increase the diuretic mixture to one and a half teaspoonful four times a day. Remain recumbent and use chloral if necessary.

June 17.—Is feeling much better; there is less swelling of the hands and feet, and many of the papules and vesicles have vanished. The stronger tar-wash was

very grateful, and she passed a quiet night without chloral. The case was seen to-day by my friend Dr. Wm. H. Draper, in consultation, who agreed as to the neurotic character of the disease, and suggested in addition to the present treatment the administration of two drachms of cod-liver oil, together with three drops of Fowler's solution, three times a day. The contents of the vesicles were found to be alkaline; there was no elevation of temperature.

June 19.—Much more comfortable; there is less itching and less development of vesicles. Patient still keeps the bed, and is ordered to continue the local treatment and return to the pills, taking also the oil and arsenic, stopping the acetate of potash mixture.

June 30.—Patient is feeling very well; very little irritation or burning in the skin; the affection appears checked, as but occasional isolated vesicles appear, and the old ones are rapidly drying, C. T.

July 7.—Patient was up and around at about one month from the time of entering on treatment, and there is now hardly any trace of the eruption; no scars are left. She leaves in a day or two for the country. The vesicles and bullæ at no time have reached the size and extent of distribution attained during the first pregnancy, although the rigor of the onset and the early appearance of the eruption threatened a more severe attack. None of the bullæ have been more than $\frac{1}{3}$ of an inch in diameter, and but few of the elements could merit any other name than vesicles, while quite a proportion aborted as papules. During the former eruption almost the whole of the body, except the head, was

involved, whereas in the present, the cutaneous manifestations have been confined chiefly to the hands and feet, with some development as far as the elbows and knees, and a very slight sprinkling on the trunk.

September 16.—Has been perfectly well since last note, spending much time out of doors in the country. There has been no return of the eruption, save occasional scattered vesicles, giving no annoyance. Still continues treatment.

October 21.—Was delivered five days since of a healthy boy; mother and child did well. (The first child is living and has never had any cutaneous trouble.) The internal treatment was continued until confinement. Two days ago, *i.e.*, three days after delivery, there occurred some burning of feet and hands, and there are now groups of vesicles, very minute, about the soles of the feet and dorsal aspect of the ends of the toes; the feet are a little swollen, but the whole matter gives little or no annoyance, and is insignificant compared to the attack which followed shortly after the first confinement. She returned at once to the pills and the wash, and the papulo-vesicles are rapidly subsiding.

November 17.—Child one month old, healthy, nurses but in part. Mother doing well. No sign of the eruption. Takes porter every day.

December 1.—Slight development of urticaria, as after the previous attack, about the wrists on exposure to cold air. She is very strong and well, and is taking Tinct. ferri chloridi gtt. x., and Tinct. nux. vom. gtt. iij. after meals.

January 6, 1874.—Patient is looking remarkably

well; no cutaneous trouble of any kind. She still continues the use of the iron and nux vomica, and partakes yet of nourishment at night, as before, beef-tea, milk, etc.

After very considerable search, I find mention of but eight other cases at all similar, and these correspond so exactly with the one detailed above that I give them all in brief, in order to establish the identity of the affection and to distinguish it from other eruptions resembling it to a greater or less degree. The cases are recorded by Gibert, Chausit, Hardy, Wilson, Milton, Klein, and Hebra, in the years 1840, 1852, 1863, 1867, 1868, and 1872 respectively.

Gibert's * mention is very brief, and is as follows: "A German physician, quoted by Dr. Jos. Frank, has seen a patient who, during every pregnancy after her first confinement, was attacked with pemphigus, during the last months of gestation."

Chausit† does not notice any connection between the disease and pregnancy, but the case answers in many respects to ours: he calls it *pemphigus pruriginosus*, it is as follows:

J—— Anna, aged 23, was delivered of her first child, a boy, six weeks before full term. She was of robust constitution, and of good health, but at the fifth month of gestation, from no known cause, she began to be tormented with intense itching and an eruption on the body and limbs of numerous minute solid papules; the itching increased in severity as pregnancy advanced. On

* Traité pratique des maladies spéciales de la peau, Paris, 1840, p. 102.

† Annales des maladies de la peau et de la syphilis, March, 1852, p. 142.

the fifth day after *accouchement*, she experienced greater itching and general burning. The fever rose, and some delirium ensued. In the morning the whole body was covered with a very confluent eruption of large salient red papules, resembling in some respects those of erythema papulatum. The eruption preserved the same appearance for two days, and on the third there were seen on the arms some scattered transparent bullæ, varying in size from that of a haricot-bean to a hazel-nut. The number of these bullæ increased from day to day, until now, on the eleventh day, the whole body, including the face, is covered, and the burning and itching have completely ceased. From ten to twenty new bullæ form daily without pain or burning, and, if large, soon rupture, or if small subside by the absorption of their contents. The original papules have disappeared and the bullæ forming daily are not preceded by them. The bullæ ceased to appear on the seventeenth day, and a few days later all traces of the eruption had vanished, except brownish staining where the bullæ existed. A month later, *i.e.*, six weeks, about, after confinement, there was a slight general itching over the body, followed by a few groups of papules, on different parts of the body, which soon faded, no bullæ being formed.

Hardy* describes a similar eruption of blebs attended with great itching in a pregnant woman, also under the name *pemphigus pruriginosus*. The patient was 35 years of age, had already had nine children, and was now far advanced in her tenth gestation. Since her

* Leçon sur les maladies de la peau, 2d part, p. 136. 2d ed., Paris, 1863.

second child, she had suffered from a similar eruption with each pregnancy, it commencing some weeks after conception, the one described being the eighth. The whole body itched excessively, so that sleep was almost impossible. The bullæ were small, not exceeding the size of a hazel-nut, and the skin became darker and the seat of a viscid secretion. These phenomena in each instance continued in increasing severity until delivery, when they gradually disappeared, to return at each conception with greater intensity. After delivery there were several slight outbreaks of the disease, but she was entirely well one month after the birth of the child. In the interval she was perfectly well, and the children were healthy.

Wilson,* under the title *herpes circinnatus bullosus*, mentions two cases of a bullous eruption, "associated with pregnancy, beginning with conception and ending with the completion of parturition." I quote his short account: "Both cases were remarkable for perpetual irritation and intense pruritic suffering. The bullæ were of the flat and foliaceous kind, some filled with limpid serum, and others with a muco-purulent fluid, and were associated with moist excoriations, thin crusts, papulæ, and pruritus. In one patient the cutaneous disease was the first intimation of pregnancy; the disease continued during the whole period, accompanied four or five pregnancies in succession, and completely exhausted her health and strength. In other respects and in the intervals she was a strong and handsome woman. The other patient came before us at the age of

* On Diseases of the Skin, London, 1867, p. 294.

36; she had nine children; the eruption made its appearance with the fourth pregnancy, and has accompanied every pregnancy since. When parturition was over the eruption ceased; but on the last occasion, nine months ago, it remained, and has now assumed a permanent character. She thinks, moreover, that at the present time she may be in the family-way again. In both cases the eruption was accompanied with sympathetic gastric disturbance, and with a duskiness and cachexia of the skin."

J. L. Milton * recorded, shortly after, a parallel case, giving Wilson's designation, *herpes circinnatus bullosus*, which was afterwards, in transcribing the case to his book, † changed to *herpes gestationis*, which name we have adopted. Milton's case was in brief as follows:

A healthy-looking woman, aged 45, in the fourth month of her eighth pregnancy, began to be distressed by a most intense itching, smarting, and heat of the skin of the arms and forearms, upon which parts a vesicular and bullous eruption soon developed. When first seen, nearly the whole surface of the inner part of the right arm and forearm, and a somewhat less but still very considerable extent of the left arm and forearm, were covered with vivid red, very slightly elevated patches, varying in size from that of a bean to that of the base of a split walnut. On most of these patches were vesicles about the size of a small pea, very rarely solitary, and generally in groups of two to four. They were

* Journ. of Cutan. Medicine, Vol. I., No. 3, p. 311.

† The Pathology and Treatment of Diseases of the Skin, London, 1872, p. 205.

mostly prominent and pointed in shape, but some were oblong, with the ends apparently communicating. They were in all stages, some quite tense from accumulation of limpid serum; others just rising. She noticed none of the vesicles before the previous day, though the patches had formed a day or two prior to this. Her face had a peculiarly distressed look, and she complained of utter sleeplessness, occasioned by the intense itching, smarting, and heat.

A week later the complaint had gained ground greatly; there were now at least fifty patches on the right arm, all bearing vesicles varying in size from a pea to a haricot-bean, some also coming on the outside of the arm. The disease continued to increase, so that a few days later the front part and sides of the abdomen and the inside of the thighs were almost covered with the same red patches, and in two or three days more almost the whole surface of the body, except the back, face, and hairy scalp, was involved. The irritation was most distressing and sleep impossible, pulse 120. She was given a supporting diet and stimulants, and had the entire surface enveloped in wrappings of mutton-suet.

By April 8th, twenty-four days after first seen, vesication had pretty well ceased, the irritation of the skin was greatly lessened, and she could obtain some refreshing sleep. The improvement was of short duration; many of the symptoms returned and persisted until premature labor took place—nearly three months in all—when she was delivered of a fœtus between six and seven months old, which was stated by the medical gentlemen who attended her to have been dead

some time. Directly after her confinement, the eruption began to relapse, and by the third day she had a tolerable crop of large vesicles on each arm, while many of the spots on the legs and trunk became speedily covered with dry, yellow crusts. These soon abated again, and two weeks later she was almost entirely free from them and had no relapse.

This woman had had similar attacks twice previously, with her first and fifth pregnancies; all three attacks began at about the same period, ran the same course, and disappeared spontaneously after parturition, without having been influenced much by treatment. The second attack was more severe than the first, and the third worse than the second. The disease occurred first in 1853, when she was thirty-one years of age—the child lived; the second eruption at her fifth gestation was attended with a still-born child, as well as the one above detailed. There were intervals of seven years between each of the eruptions, and two living children born between each, without the mother having any eruption with them.

"From the very outset," says he, "I had expressed a decided opinion as to the inefficacy of any treatment whatever, and certainly I never observed that the medicines prescribed exerted the least real control over the progress of the complaint."

The next similar case which I find is given by Dr. Klein,* of Jicin. The patient, 32 years of age, in the beginning of the 7th month of pregnancy, noticed on

* Allgemein. Med. Zeitung, Vienna, Aug. 6, 1867; quoted in Jour. Cutan. Med., July, 1868, p. 203.

the upper extremities and the thorax a number of vesicles the size of millet-seeds, the contents of which were transparent. She took a few baths, but grew worse under their influence, and the vesicles formed with such rapidity and in such increased numbers, that almost every part of the body was very soon covered with them, and they also so increased in magnitude that by this time they varied in size from that of a walnut to that of a hen's egg, and the contents, clear at first, soon became turbid. At the same time, she suffered very severely from pains, and her strength declined visibly. A supporting treatment was given, with iron, quinine, wine and beer, the affected surfaces dusted with lycopodium, starch, and morphine, and the obstinate constipation relieved by clysters.

This state lasted two months, until confinement, when she at once began to mend rapidly; the vesicles, which still appeared, grew fewer and fewer in number, while the skin on the parts which had been invaded became healthy and the bed-sores closed up. In fourteen days she could leave her bed, and within a few weeks had entirely recovered. The child, which was healthy, was cared for by another person. The patient had previously borne two strong, healthy children, and had enjoyed good health during her pregnancies.

Hebra* gives an account of another case of the same nature, which he calls pemphigus. He says:

Several years ago, a young woman came to Vienna from Russia, having suffered from pemphigus during three successive pregnancies. On the first occasion, it

* Wiener Medicin. Wochenschrift, No. 48, 1872.

appeared during the fifth month, and disappeared after delivery, and on the second, it continued one month after delivery. On the third, it did not thus disappear, but passed into a state of chronic pemphigus, and this it was that brought her to Vienna. Under the use of the baths of Vöslau and other means, she completely recovered. During the first month of the next pregnancy, some bullæ appeared on the lower extremities, and afterwards, as in the former pregnancies, extended to the arms. Loss of appetite and sleep reduced her to much the same condition she was in when she first came to Vienna. After delivery she soon lost her pemphigus. On two subsequent occasions she became pregnant, the pemphigus reappearing in both and lasting for some time after delivery.

The peculiar features of this remarkable disease, as gathered from the preceding clinical histories of nine almost precisely similar cases, recorded by eight observers during a period of twenty years, may be thus summed up:

1. There is an affection of the skin directly dependent upon the gravid state of the uterus, which may make its appearance at any period of gestation up to the seventh month, and generally continues until the organ is emptied of its contents, and has in a measure resumed its former state; this eruption is very apt, moreover, to recur at each successive conception. (See Table of Cases.)

2. The cutaneous manifestations are chiefly an intense irritation, consisting of burning, itching, or stinging, and sometimes pains, with the development of erythema,

papules, vesicles, and bullæ up to the size of a hen's egg, the majority of the blebs, however, seldom surpassing in size a large bulla of herpes. These vesicles are commonly in groups, but do not follow any definite nerve-tracks, appearing first generally on the extremities and afterwards involving the larger part of the body. Exhaustion may ensue from the cutaneous irritation, but the disease is non-febrile.

3. The eruptive disease does not terminate at once after delivery, but slowly retrogrades, by the development of fewer and fewer vesicles at increased intervals, until the disposition thereto ceases entirely. An outburst of greater or less severity is most likely to happen on the third day; it is rare for any manifestations of the disease to remain a month after parturition.

4. This affection is sometimes accompanied or followed by other neurotic manifestations, as erythema, urticaria, and neuralgia, which may continue in the interval of conception, while in many instances the patient experiences perfect health in the *interim*.

5. This eruption has occasionally been the first indication that impregnation has taken place.

6. The majority of the cases have been uninfluenced by treatment, relief occurring only on the emptying of the uterus.

7. The children are not, as a rule, affected by the eruption in the mother, although in one case it was accompanied in two instances by a still-birth; here, however, the first eruption was followed by the delivery of a living child, whereas the second conception gave a still-born child without any maternal eruption.

HERPES GESTATIONIS.

No. of Pregnancy.	GIBERT, 1840. Pemphigus.	CHAUSIT, 1852. Pemphigus pruriginosus.	HARDY, 1863. Pemph. prurig. Aged 35.	WILSON, 1867. Herpes circinnatus bullosus.	Aged 36.	MILTON, 1867. Herp. circin. bull. Aged 45.	KLEIN, 1868. Pemphigus.	HEBRA, 1872. Pemphigus.	BULKLEY, 1873. Herpes gestationis. Aged 32½.
I.	... ...	Appeared in fifth month of gestation, and lasted to delivery.	....	....	....	Boy child, 1853. 1st eruption.	Two strong healthy children.	Appeared in 5th mo. Girl child, lived.	Appeared in 7th mo., lasted to end. Relapse two or three days after delivery.
II.	Appeared during last months of gestation.	....	....	....	....	Stillborn child, 1854. No eruption.	....	Appeared in 3d month and continued one month after delivery.	Appeared in 5th month. Disappeared under treatment, slight relapse on 3d day.
III.	ditto.	....	Appeared few weeks after conception, and lasted to delivery.	....	....	Boy child, 1855. No eruption.	Appeared at beginning of 7th mo., lasted to end.	Stillborn boy. Passed into state of chronic pemphigus.	....
IV.	Recurred with each pregnancy, number of times not stated.	....	ditto.	Accompanied four or five pregnancies in succession, and continued during the whole period.	Appeared in fourth pregnancy, lasted to end.	Boy child, 1858. No eruption.	....	Appeared during first month. Healthy boy.	....

V.	....	....	ditto.	....	ditto.	Stillborn child, 1860. 2d eruption.	....	Lasted some time after delivery.	....
VI.	....	....	ditto.	....	ditto.	Girl child, 1861. No eruption.	....	Lasted some time after delivery.	....
VII.	....	....	ditto.	....	ditto.	Girl child, 1863. No eruption.	....	....	....
VIII.	....	....	ditto.	....	ditto.	Stillborn child, 1867. 3d eruption. Commenced in fourth mo. Miscarriage 6th—7th mo.	....	....	....
IX.	....	....	ditto.	....	ditto. Remained after this confinement for nine mos.	....	....	....	....
X.	.....	.....	ditto.	.....	.....	.....	.....	.....	.....

The questions now arise, what is the nature of this disease, its nosological relations, and what its appropriate treatment? I can find but very little in the gynæcological works at my command, or in the periodical literature with reference to the relations of the skin and the uterus, other than brief mention of the pruritus and chloasma attending the pregnant state, and also certain disorders of the female organs. That a very intimate connection exists between the skin and the genitals is evident from many circumstances.

Thus, all recognize the changes which take place in the cutaneous envelope as puberty approaches, the growth of the pubic and axillary hairs in both sexes, the changes of color and expression, with the more abundant development of adipose tissue in females, and the appearance of the beard in man. We are equally aware of an arrest of sexual development or of an improper performance of the functions connected therewith, by the chlorotic pallor or darkened skin beneath the eyes, and the clammy hands and acne-sprinkled faces of those misusing these functions. Not less striking are the phenomena observed in the lower animal kingdom, the development of the antlers in the stag, the increase in brilliancy of plumage of birds, and changes in the fur of animals during seasons of sexual excitement.*

Pathologically, we observe acne punctata and simplex appearing in a large share of the cases early in life, at about the time of the first appearance of the menses in girls, and puberty in boys, and again in the decline of

* Dr. J. M. Hyde, Chicago Med. Jour., March, 1873.

the sexual function we often meet with acne rosacea at about the time of the menopause. Many cutaneous diseases are worse at the season of the monthly period.

From the above analogies it might be expected that the grave and important changes in the uterus during pregnancy would be reflected upon the skin, and this we find to be the fact. Physiologically we find the skin around the nipples darkening and the sebaceous glands developing, also on the abdomen* "a brownish line is observed on the skin, extending from the pubis to the umbilicus, where it mostly stops, though it sometimes extends beyond it in dark brunettes."† Accordingly one of the most common of the abnormal appearances on the skin during pregnancy is chloasma, namely, a brown discoloration of the skin resembling this physiological pigmentation, occurring chiefly on the face, and there most commonly on the forehead. Naturally this will not disappear very soon after delivery, but gradually fades and is then quite easily removed, to recur, however, in successive gestations. Of this I have seen repeated instances. It must be remembered that by chloasma is to be understood a true chromatogenous disease, and one clearly to be distinguished from the pityriasis- or more properly tinea-versicolor, a parasitic affection found on the trunk, seldom on the head. True *chloasma gravidarum*, or *uterinum* as it has been called, differs from the *tinea* in being not at all scaly, except when irritated, nor can scales be scraped off, as the pigmentation is seated in the rete Malpighii, it is

* Graily Hewitt, Dis. of Women, Phila., 1868, p. 297.
† Cazeaux, Phila., 1866, p. 141.

not at all elevated above the surface, and the margins fade sometimes insensibly into the surrounding skin. Dr. H. G. Hand * reports a case of very deep bronzing of the skin of the whole body to the color of dark coffee, which commenced three and a half months before delivery at full term, and gradually faded thereafter. Montgomery † tells of a lady who in her first pregnancy observed brownish spots or patches on the sides of the forehead and temples, which she at first mistook for soils on the skin, but they remained permanent; and when she became pregnant again a further addition was made to them, so that after several pregnancies the dark marks extended so far down each side of the face, that the lady was obliged to dress her hair in such a way as to cover them. The most remarkable circumstance in this case was the permanence of the marks, which almost always disappear after delivery. Lacet relates the case of a woman whose face, in three successive pregnancies, became quite black.

Prominent among the effects of pregnancy on the economy are those referable more or less directly to the nervous system, as facial neuralgia, cephalalgia, chorea, palpitation of the heart, mania, etc.,‡ together with anomalous affections of the organs of sense, especially of sight and hearing, altered sensibility of various parts, occasional spasms, slight attacks of singultus,§ and pruritus of the integument. The last affection, which principally interests us, is either local and con-

* North-Western Med. and Surg. Jour., Jan., 1873.

† Signs and Symptoms of Pregnancy, Phila., 1839, p. 103.

‡ Tyler Smith, Lancet, March 1, 1856.

§ Copland's Dict. of Pract. Medicine. Vol. III., p. 504.

fined to the region of the genitals, or it may be general, so that the whole body is distressed. Of the local variety we shall say but little, as it is well recognized and described with its appropriate treatment in most of the works on obstetrics and diseases of women. It very frequently depends on local causes entirely disconnected with pregnancy, as ascarides, pediculi, vulvar folliculitis, an acrid condition of the sebaceous secretions, vascular tumors of the urethra, etc.,* although Meigs† states that he judges that ninety per cent. of the instances he had met with were in women *enceinte*. General pruritus is less common, but is more or less a distinct disease dependent on the gravid state of the uterus, inasmuch as it disappears completely at once upon parturition. Cazeaux relates a case published by Maslieurat-Lagemart, of "a lady, who in eight successive pregnancies was afflicted with itchings so violent as to produce premature labors. On four occasions they began in the sixth month, twice at eight months and a half, and twice in the seventh month. They appeared almost instantly over the entire cutaneous surface; the legs, thighs, genital parts, the whole trunk, the neck, face, scalp, were all affected; nothing escaped but the palms of the hands, and even they were invaded at a later period. So severe was the irritation that the violent rubbings of the poor sufferer excoriated the skin. Hardly was she delivered when they vanished entirely." He himself had seen three cases of general itching which yielded quite promptly to alkaline bath (℞ Potass. car-

* Graily Hewitt, Dis. of Women, Phil., 1868, p. 665.

† Woman and her Diseases. 3d Edit. Phil., 1854, p. 93.

bonat. ʒ v. to the bath). Hebra* records the case of a lady who during the first five months of five successive pregnancies suffered from so violent a pruritus cutaneus that her rest at night had been disturbed, her mind kept in constant irritation, and her nutrition impaired, while her skin presented a scratched appearance usually seen on those suffering from epizoa. I have very recently had under my care a distressing case of pruritus connected with pregnancy, where the shoulders, arms, thighs, and lower part of the trunk were the seat of such intense itching that rest seemed impossible; upon the subsidence of this under treatment, persistent hoarseness ensued, not due to cold, which gives no annoyance save the inability of speaking above a whisper. The loss of voice is evidently nervous, it having occurred with the preceding pregnancy, when it lasted to delivery and disappeared spontaneously thereafter, which result she expects to happen again with the expiration of gestation yet a month or two distant.

Such then being the nervous phenomena, with many others, excited in certain instances by the impregnated uterus (and here let me say that the pigmentary anomalies described above may also be referred to perverted innervation, as appears to be certainly the case in leucoderma or vitiligo), let us see how a farther nerve-irritation may result in true cutaneous lesions as in the cases of herpes which form the basis of our article.

The nerve origin of many diseases of the skin has now

* Wiener Med. Wochenschrift, No. 48, 1872.

passed beyond the region of conjecture, and although it would be out of place here to study the mode of production of the lesions, we may mention some of the results observed and their relation to each other. Dr. Woaks * has collected numerous instances where injury or shock was associated with neuralgic symptoms and alterations, to varying degrees, in the skin supplied by the nerves implicated. Erythema, eczema, herpes, and ulceration were observed thus connected, and herpes zoster being especially studied with reference to shock from the impression of cold, the conclusion was arrived at "that, owing to the suspension of the regulating power exercised mainly by the sympathetic nerves over a given artery, effusion of fluid takes place from its ultimate ramifications. These being distributed to the skin on the one hand, and to the texture of the sensory nerves on the other, the effusion so caused produces the herpetic rash in the former and pain from mechanical pressure in the latter." Handfield Jones † recognizes vaso-motor nerve-paresis as a cause of many affections of the skin and instances of zona, pemphigus, hyperidrosis, urticaria, and hyperæmia connected with and evidently dependent on weakened and relaxed nerve-power. This neuro-pathology of some skin diseases is recognized also by very many, in text-books and elsewhere. Now the human system can hardly undergo any greater strain upon its powers, and those of its nerve elements especially, than is afforded by pregnancy, which latter is evidenced by the manifestations

* Journal of Cutaneous Medicine, Vol. I., No. 3.
† Ibid., Vol. II., No. 6.

of nervous disorders we have alluded to, and which might be inferred from the fact that the nerves of the uterus are enlarged during pregnancy,* as if to meet this requirement. Consequently we are not surprised to find cutaneous disorders especially attributable to nerve-paresis occurring repeatedly during that state. As before stated, the simplest and most common derangement observed is simple pruritus, or irritation of the sensory nerves of the skin. When, now, there is still greater nerve irritation, paresis of the vaso-motor nerves ensues, causing hyperæmia, and fluid is poured out in varying quantity, giving rise to urticaria, eczema, herpes, and pemphigus, according to its extent and individual idiosyncrasy, the first being the least expressed form, and the last the greatest, of confined and limited exudation.

These forms of skin-disease are occasionally met with during and dependent on the pregnant state, although the recorded cases are few. Hebra mentions having seen them thus connected, and McCall Anderson,† quoting Hebra, says of eczema: "Its occurrence is not unfrequently favored by pregnancy, in which case the hands, the feet, and the neighborhood of the genital organs are the parts most frequently affected. So uniformly does this occur on the hands of some females when they become pregnant, that they can tell more certainly that they are with child by the appearance of the eczematous eruptions than by the cessation of the menstrual discharge." I find, on inquiring also among

* Stricker, Manual of Histology, p. 616.

† A Practical Treatise upon Eczema, London, 1867, p. 42.

some of the obstetric practitioners in this city, that the observance of eczema accompanying each pregnancy is not at all uncommon.

Other eruptions besides those mentioned above, and which have not been demonstrated to depend on nerve influence, are frequently seen attending each pregnancy; thus, I have at present a patient under my charge in whom an acne rosacea has developed about the mouth and chin with each pregnancy, also one who has had psoriasis since early childhood, in whom the disease is always worse during gestation. McCall Anderson* gives a case of a woman in whom psoriasis appeared while nursing each of three male children, it being absent in the interval and while nursing two female children; it appeared about the sixth month of suckling, and vanished soon after weaning. Three cases of psoriasis during lactation are also recorded by Dr. M. H. Henry.† These are all evidently due to the debility caused by lactation, and cannot be included in our argument, but are inserted here for completeness.

To return to the affection with which we commenced, *herpes gestationis*. The analogies and illustrations above cited, together with the clinical histories of the nine cases, in seven of which we have the history of recurrence with each gestation and disappearance on parturition, as a rule, are to us sufficient proof that the eruption is essentially connected with and dependent on the gravid state of the uterus, and is, moreover, a neurosis.

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* Psoriasis and Lepra, London, 1865, p. 14.

† Am. Jour. Syph. and Derm., Jan., 1871, p. 49.

Nor do our cases correspond to those detailed by Henry Contagne * in his monograph on *Acute general febrile herpes*. His cases were all in males, aged respectively 17, 18, 20, and 39 years; the course of the disease was short, lasting from eleven to twenty-one days; and in but one instance was there a recurrence of the eruption, and that only once.

Neumann† describes, under *herpes*, a disease somewhat resembling ours but still very different; he had observed but five cases of it, four males and one female. It began with small papules, which after a few days increased peripherally, the apex soon becoming vesicular. These were seated upon infiltrated patches on whose margin new papulo-vesicles continually formed, while the centre dried up, occasionally with a vesicle produced in it.

By this means in two cases almost the whole body was covered with gyrate forms produced by the confluence of the margins of these vesicle-bearing patches. On the palms and soles the vesicles bore the greatest resemblance to eczema; on some parts of the body the crusts formed were very thick and adherent. The disease lasted many months, and in one instance two years; it was attended with severe itching. An almost precisely similar case is described by Ad. Lafaurie,‡ and an excellent plate of the same is given. It occurred in a girl twenty-four years old, lasted many months, and

* De l'Herpes Généralisé Fébrile, Paris, 1871.

† Lehrbuch der Hautkrankheiten, 3d edition, 1873, p. 188.

‡ Ueber die Unzulänglichkeit der bishderigen Pemphigus-diagnose, Würzburg, 1856, p. 58.

was accompanied with intense burning and itching; he called it *herpes pemphigodes.* But our eruption presents many features widely different from this affection.

Acute febrile pemphigus has been described by some* and denied by others,† in adult life, but the symptoms as depicted appear to us to belong rather to herpes than the disease generally known as pemphigus.

That the affection we have described is not simply an eczema appearing in pregnant women, is certain from the histories given; there were no moist, scaling, or cracking surfaces, but simply the development of papulæ, vesicles, and bullæ, as described, which disappeared in part without exfoliation, and when pricked the vesicles subsided rapidly. No trace of the eruption remained on the parts affected, save a slight staining.

As seen from the histories, this eruption has been called pemphigus in most of the cases I have quoted, Wilson and Milton alone designating it herpes. When I first saw the case I gave the name herpes to the cutaneous manifestations present, and have been strengthened in the propriety of the diagnosis since my studies on the subject. At no period during the attack which I witnessed were there bullæ more than half an inch in diameter, and that very rarely, whereas by far the larger part of the eruption consisted of papules and vesicles resembling eczema, but, as before stated, the

* Annales de Dermatologie et de Syphiligraphie, 4th year, No. 6, p. 401.

† Gintrac. Cours Théorique et Clinique de Pathologie interne, vol. 4, p. 712.

period on the suggestion of Dr. Draper, contributed their quota to the result.

We lay considerable stress upon a dietary element of treatment which was begun shortly after the appearance of the disease, and which was continued till long after confinement, namely, the taking of a considerable portion of oatmeal just before retiring every night; this was replaced by bread and milk, later. Of this plan of nourishment we can speak in the highest terms, using it very frequently whenever there is a low state of health and impairment of nutrition; the additional nutriment in a digestible form and at this time of day has with us given excellent results. Other cereals answer very well, as cracked wheat, etc., and a little wine or milk may be added. I find this very acceptable to patients, and that it rather increases the appetite for breakfast than otherwise.

None of the writers we have quoted mention any treatment for the disease in question, and our results were so thoroughly satisfactory that in case of a return of the affection, or in another case, we should follow the same general plan of treatment.

It is hoped that other observations will follow on this affection, by those who are largely occupied with obstetric practice.

THE

USE AND VALUE OF ARSENIC

IN THE TREATMENT OF

DISEASES OF THE SKIN.

BY

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PREFACE.

THE following essay does not claim to be exhaustive; its aim is to present the subject of the therapeutical use and value of arsenic in diseases of the skin in a clear and practical manner, and to furnish the practitioner with evidence of its safety on the one hand and its utility on the other. It is hoped that, by pointing out where it is of service and in what diseases useless, the remedy may be prescribed in a more intelligent manner than is frequently the case, and that in the end, perhaps, less arsenic may be used, because its employment may be restricted to proper cases.

I think it right to state, in reference to the larger doses given in certain cases here reported, that the experience may be exceptional, and desire to warn any, especially laymen, against construing anything herein said into a warrant for an injudicious use of the mineral, for a remedy which is so potent for good is capable also of inflicting much evil. Under no consideration should arsenic be taken except under the immediate guidance of a medical man of experience.

This essay was read before the American Medical Association, June 7, 1876, and ordered to be printed in the Transactions: it appeared in the NEW YORK MEDICAL JOURNAL, for August, 1876, and is thence reprinted. It is presented in this form for convenience of reference, it being believed that many would desire it separate from the Transactions of

the Association. Should it be thought by some that I contradict anything in my essay before the same Association two years ago, on "The Management of Eczema," I will beg a careful study of this entire essay and also of that one; and, as a further caution against the misconstruction of what is contained in this, I will quote, as still true, in my opinion, the eighth and last proposition given in the summing up of the former essay: "Arsenic and zinc ointment, while serviceable in many instances, are so far from being specifics for eczema, that their use is injurious in many cases, while almost always other remedies will either suffice alone or greatly assist their action." The only qualification which two years' additional experience would lead me to make, is to say, "frequently" instead of "almost always," in the above sentence.

L. D. B.

New York, *September*, 1876.

ON THE USE AND VALUE OF ARSENIC IN THE TREATMENT OF DISEASES OF THE SKIN.

THERE is probably no empirical remedy in medicine better known or more frequently prescribed than is arsenic in the treatment of diseases of the skin, and yet I venture to say that there is no remedy whose action is so little understood, and withal whose effect is more uncertain, than is that of the same drug, as generally used; for, when we consider diseases of the skin as a class, without any special reference to the individual case or the diagnosis, arsenic is not only useless in a very large share of the cases, but is very frequently absolutely harmful.

The subject has presented itself thus to my mind, because in my practice it has been very uncommon for me to meet with a patient, even with eruptions which have proved to be parasitic or syphilitic, who has been previously treated by general practitioners, who has not taken arsenic, and it is very commonly the failure of this supposed specific which has led the physician to seek the consultation.

Before speaking of the true value of arsenic in the treatment of any disease of the skin, I must, therefore, insist upon

the absolute necessity of accuracy in diagnosis as the very first step toward success in treatment; for affections of this great organ, the skin, are not a unit, as the practice of so many would seem to indicate, but they are more diversified than those of any other portions of the body, and require treatment as different as the pathological states and etiological factors are various. To prescribe arsenic, therefore, because the skin is affected, is as unwarranted as it is to seize upon any other empirical remedy, and to administer it in each and every disease to which any other special organ is subject.

I must be pardoned for dwelling thus upon what is a truism to many, for all will acknowledge that to a great majority of practitioners the exhibition of an eruption immediately suggests to the mind the idea of arsenic. It will be understood, therefore, that in my general remarks on the efficacy of arsenic in diseases of the skin, I refer not to the whole as a class, but to the special affections in which experience has shown it to be of service.

Popular opinion is never without some measure of support in truth, and the general medical impression of the value of arsenic, as an agent to modify changes in the skin, has foundations which it is not difficult to discern. It will be our task to examine these, to see how they have stood the test of time and experience, and to endeavor therefrom to furnish as definite and accurate indications as possible for our future guidance in the use of this drug.

Although now so generally known in connection with the treatment of diseases of the skin, the use of arsenic in this class of affections is not a gift of the ancients, indeed it dates back less than one hundred years, and those to whom its general introduction was principally due have passed away only within the memory of many now living, as Hunt, Emery, Biett, and others. An essay on the action of arsenic would not be complete without the mention of the name of Girdlestone, who was almost the first to suggest its use in diseases of the skin;[1] nor should the impetus given by Begbie's paper on the physiological effects of arsenic[2] be overlooked.

[1] *London Medical and Physical Journal*, March, 1806.

[2] *Edinburgh Medical Journal*, vol. iii., 1859, p. 961.

The very general use into which arsenic has come is attributable, I think, to three causes: first, to the very general desire which naturally exists in the minds of all to find some remedy which is a specific for a certain disease or class of diseases, the history of medicine being made up of successive attempts at finding specific remedies; second, to the physiological effects of the drug as observed in the coats of animals to whom it has been given, which, as is known, become sleek and glossy, and also in the clear skin of the arsenic-eaters of Styria, where the practice of consuming this drug as a condiment and stimulant has been verified by recent observation;[1] the third cause is, the very favorable reports which have been made from time to time as to the effects of arsenic in *certain* diseases of the skin, and inferentially it has come to be prescribed in almost all affections of this organ, partly from carelessness in diagnosis and partly in the vain hope that in some way or other, mysteriously unknown, it would modify the eruption.

That arsenic has a very decided effect upon the epithelial elements of the body there can be no question, both from physiological and therapeutical evidences; the silvery tongue after its long continuance, which results from the abundant growth of the epithelium obscuring the normal coloration, and its effects on the hairs of animals are instances of this, as also its therapeutic effects in scaly diseases of the skin. But it is also claimed and demonstrated pretty conclusively that arsenic influences greatly the circulatory system, as is shown by the increased feeling of warmth in patients taking it, and it is said to give increased strength and augmented frequency to the pulse; it is also well known that the first indication of the full physiological action of the drug is the congestion of the conjunctiva, and fullness about the face and eyes.

There is every reason, however, to believe that arsenic acts primarily through the nervous system, and that the changes induced in the skin and vascular system are secondary to this—an opinion which is shared by many, and which finds support in its very serviceable action in certain nervous diseases,

[1] Waring's "Practical Therapeutics," third American edition, Philadelphia, 1874, p. 107.

chorea, neuralgia, asthma, etc., and also in its effect in malarial disease. Those who have studied its action in diseases of the skin also agree that its results are obtained by virtue of its neurotonic principles. Dr. Albutt[1] says, "Arsenic in my hands has been certainly and regularly efficacious in those skin-diseases which on other grounds I referred, or was disposed to refer, to the class of cutaneous neuroses, while in other skin-affections it has been inert or injurious." Although I cannot subscribe wholly to this, I believe most firmly that the results from arsenic are obtained by virtue of its action on the nervous system, and I have elsewhere shown the very great dependence of many, if not all, skin-diseases upon structural or functional derangement of the nervous portion of our organism;[2] but I also believe in the value of arsenic as a general modifier of cutaneous nutrition, and, as will appear later, I regard it of the utmost service in many of the diseases of the integument, even where no nervous elements can be found.

It will be understood, of course, that arsenic acts through the medium of the blood; it is absorbed, enters the circulation, can be detected in the urine, and also is found in the viscera after death by poisoning from it.

With this much of introduction, let us proceed to consider what real value experience has shown arsenic to have in diseases of the skin. About this we will find not a little conflict of opinion: some, as the late Mr. Thomas Hunt, of London, a man of large experience with diseases of the skin, believe it to be all efficient, to be indeed almost the sole remedy in a large share of these affections, while others ignore it almost entirely or yield it only a very small place in the remedies they recommend to meet this class of diseases. The truth evidently lies between the two extremes, and, as it is seldom safe to accept any dictum in medicine, let us study the remedy before us cautiously and with a judgment based on what is known of its physiological action, and of the nature of the affections to be treated.

[1] *The Practitioner*, November, 1874, p. 322.

[2] "The Relations of the Nervous System to Diseases of the Skin." G. P. Putnam's Sons, 1875. Also *Chicago Journal of Nervous and Mental Diseases*, October, 1875.

or psoriasis, then, is the disease of the skin in the treatment of which I find the first mention of the administration of arsenic, and it is in psoriasis that arsenic has been prescribed most largely and confidently ever since, for at least fifty years and more, and this is almost the only disease of the skin in which Hebra allows that arsenic has any effect.

But psoriasis is the disease above all others in which it is most difficult to determine the true action of any remedy, because of its natural tendency to change with the season, for all know that the eruption of psoriasis may disappear quite spontaneously, and it is rare that it does not become very much less pronounced in summer; moreover, in certain cases a marked change in diet or habitation, or some very simple remedy, or the accession of acute internal disease, may produce a very visible and decided alteration in the appearance of the patches. The reports, therefore, of great success attending the internal use of arsenic in this disease must be accepted with considerable caution, especially when we take into consideration the fact that the eruption may return after an absence or an apparent cure of one, two, or more years.

But can arsenic ever cure psoriasis? I answer most emphatically that it can, and that in proportion, first, to the age of the patient; second, to the duration of the disease; and, third, to the amount of previous treatment. 1. In very young subjects, I mean ten or twelve years or under, psoriasis is comparatively curable, and, as a rule, need not run on, as I have known of its doing, from the age of five to that of fifty-five years, and arsenic should always be given fearlessly and patiently to children afflicted with psoriasis, and with very good probability of effecting a cure, that is, a *permanent* removal of the disease. 2. Recent attacks of psoriasis for the first time in persons of older years may be treated with arsenic with very encouraging prospect of success, but the remedy should be continued for a long time and very steadily. 3. In those who have had the eruption for many years and have received little or no treatment, I believe arsenic will accomplish the cure of the disease in many instances, although a previous trial of the remedy irregularly, and conse-

quently ineffectually, diminishes very considerably the chances of success.

In those cases, however, where arsenic has been tried repeatedly and perhaps for some length of time, that is, weeks or months, and without permanent result, little can be expected from it, even from a full and faithful course, such as will be detailed later. But even here it will be found that, combined or alternated with other remedies, arsenic is still of power; it will be constantly found that the error was not in the drug but in the manner in which it was used; when other elements of disease or derangement are removed, the remedy will be able to assert itself. In the event of its final failure recourse must be had to other remedies, as phosphorus, tar, etc., of which this is not the place to speak, but which give success when arsenic fails.

A word in regard to the length of time for which arsenic must be given in psoriasis. Begbie,[1] in his admirable essay on the physiological and therapeutical effects of arsenic, says: "I have never seen the loathsome scales of lepra or psoriasis drop from the skin and leave healthy cuticle till the eye and tongue manifested that the system was under the influence of the mineral, and that for days or weeks together." And this persistence in the remedy, which is advised by many, I can indorse most heartily, and I charge much of the want of success in the treatment of this disease to the physician, who, not having himself assurance in the diagnosis and without understanding and belief in the proper treatment, fails and must fail to inspire the patient with the confidence necessary for a prolonged arsenical course. To quote again from Begbie:[2] "The curative properties of arsenic may be obtained in some instances before the physiological effects present themselves, but, in order to secure its virtues as an alterative in a large class of chronic diseases which yield to its influence, it will be necessary to push the medicine to the full development of the phenomena which first indicate its peculiar action on the system. Arsenic as a remedy is too often suspended or altogether abandoned at the very moment when its curative powers are

[1] *Edinburgh Medical Journal*, vol. iii., p. 965, 1858.

[2] *Loc. cit.*, p. 961.

coming into play. The earlier manifestation of its physiological action is looked upon as its poisonous operation; the patient declares that the medicine has disagreed with him; forthwith the attendant shares his fears, the prescription is changed, and another case is added to the many in which arsenic is said to have failed after a fair trial of its efficacy."

To obtain the full measure of success with arsenic in psoriasis, it should not only be administered until the eruption entirely disappears, but it should be continued for a period thereafter, varying in proportion to the length of time the disease has previously existed—and this time measured by months, rather than by days or weeks. There will be difficulty in securing this, but of its value and necessity there can be no doubt.

In speaking of the power of arsenic over psoriasis, I would not leave the impression that it is to be used to the exclusion of other remedies, for in my experience I think I have never seen a case cured by arsenic alone, but I am only endeavoring to give due credit to a remedy which some of the modern practitioners in dermatology have much undervalued. This has happened, I opine, chiefly from the impatience which the more rapid and visible (and temporary) results of local treatment, as witnessed in some of the hospitals abroad, beget, which results it is difficult to obtain in the ordinary run of practice here, and a knowledge of which, moreover, the general practitioner, for whom I write this, cannot acquire.

Coming now to the varied and ofttimes perplexing *eczema*, what can we expect from arsenic in its treatment? Two years ago, when addressing this learned Association on "The Management of Eczema,"[1] I endeavored to warn against the far too common rut into which practitioners fall in regard to this disease, that of generally prescribing oxide of zinc ointment and Fowler's solution, and there ending their thought of the case; also on other occasions I have striven, in the same general direction, to show the important relations of the ner-

[1] "Transactions of American Medical Association," 1874. Reprinted by G. P. Putnam s Sons, New York.

vous system,[1] as also the relations of the state of the urine,[2] to this and other diseases of the skin. I sincerely trust, therefore, that I will not be misunderstood when I speak favorably of the treatment of eczema with arsenic, for, while I prize it most highly in certain cases of this disease, I would by no means prescribe it in every case nor for every condition of the disease, and rarely do I trust to it alone. I do not, therefore, when I laud its action in some cases, wish to leave the impression that arsenic is the sole remedy for eczema, although it must be acknowledged that there is no other one remedy with like effect, hardly excepting cod-liver oil, whose action is marvelous in proper subjects.

Arsenic, then, is capable of affecting certain cases of eczema in a most desirable manner, and occasionally is, I believe, essential to a cure, as the following history will show:

T. H., aged five years, came first under my care on May 11, 1875. He had suffered continuously from a severe eczema of the head, face, and other parts for more than four years and a half, in varying severity at times. When first seen, the whole face, eyes, head and neck were covered with a moist papular eczema, bearing evidence of great itching, and his father testified that he tore the parts constantly, his sleep at night being almost entirely prevented. The arms were likewise affected and the little patient wore the troubled, exhausted look common to such sufferers, and the father seemed almost equally discouraged.

He was treated in the usual way for sixteen weeks, taking cod-liver oil for a period, and for the latter six weeks a mixture of iron and bark with three minims of Fowler's solution three times a day. At the end of this time there had been really no gain, and the boy's sufferings were intense, although the treatment had been followed very faithfully. At this date, other internal medication being suspended, a mixture of equal parts of Fowler's solution and cinnamon water was

[1] *Archives of Electrology and Neurology*, November, 1874, and May, 1875. Reprinted by G. P. Putnam's Sons, New York.

[2] *Archives of Dermatology*, October, 1875. Reprinted by G. P. Putnam's Sons, New York.

prescribed, and four drops of this were ordered to be taken three times a day, the dose being increased by two drops every other day until twenty were reached. The same local treatment as before was used, with the addition of a wash of bicarbonate of soda, about half an ounce to the pint.

Sixteen days later it was recorded that there was great relief—he was then taking ten drops of Fowler's solution, or twenty of the mixture, three times daily—a large portion of the eruption had become papular, there were almost no excoriations, the child slept well and looked markedly better in every way. The dose was then increased, augmenting, as before, by two drops of the mixture or one of the arsenic until fifteen drops of Fowler's solution were taken three times a day. This dose being reached it was continued three weeks longer, until December 4th, when it was noted that the eruption had nearly disappeared, the father stating that the child had never before been so free from the eruption since its inception, four years and a half ago. The dose of fifteen drops of Fowler, thrice daily, was continued four weeks longer, it having caused no inconvenience, and the child continuing well, the father testifying that whenever the arsenic was omitted the itching returned. The dose of arsenic was then increased slowly until twenty drops of Fowler's solution were taken three times daily, but when this full quantity was reached some nausea and vomiting occurred and the dose was lowered at once to five drops, with instructions to increase slowly to fifteen drops, thrice a day, an amount previously tolerated perfectly. He continued at this dose, and on March 11th, the time of the last record, he remained entirely well, with no trace of his eczema. There was no change made in the local treatment, and no other remedy used but the arsenic as above described; during the latter part of the time the local treatment was rather neglected.

This interesting and unusual case shows the control over eczema which arsenic may have when exactly suited to it, and I can affirm that the results surprised me; for, though I have always prescribed considerable arsenic, I have not been accustomed to see such results from it, and I speak from the experience of many hundreds, if not thousands of cases in which

rangements occur; or, at least, that they are to be removed before benefit can be expected from the arsenic.

The second class of cases of eczema benefited by arsenic is that where there exists an arthritic history, past or present, in patient or family: gout, rheumatism, asthma, bronchitis, etc. Begbie was so impressed with this, that he says,[1] "Arsenic is especially an alterative in the rheumatic diathesis; it is, if I may be allowed the expression, an anti-rheumatic." In these patients the skin is red and delicate, the epidermal layer being very thin. The use of arsenic in the skin diseases in this class of patients was probably suggested by its good effects observed in their skin lesions when given for rheumatic symptoms, for the medicine was had in repute for these latter before it came to be used for cutaneous diseases. But in these subjects there is a very frequent need of alkaline purgatives, as the sulphate of magnesia, and their urine should be watched. Among the earlier signs of the physiological action of arsenic, given by some, is a marked increase in the quantity of the urine and a free deposit of urates. While I have frequently observed this to occur in patients taking arsenic, I have never been able to recognize it as an effect of the drug.

A third class of patients with eczema, where arsenic may be ordered with beneficial effect, are those where there is more or less of malarial element. Dr. L. P. Yandell, Jr., of Louisville, has recently expressed the opinion[2] that malaria is a most prolific source of acute disease of the skin; and, although by no means agreeing with him in the full, I am inclined to think that it is an element too often forgotten. We know of urticaria assuming a markedly periodic form, and may not the augmented itching of eczema at certain periods indicate something of a malarial origin. Certain it is that arsenic is often peculiarly beneficial to eczema patients who have been under malarious influence, or the subjects of some of the more commonly recognized forms of disease traceable to this poisoning.

[1] *Edinburgh Medical Journal*, vol. iii., 1858, p. 981.
[2] *American Practitioner*, May, 1876.

Arsenic is not beneficial, as far as my experience goes, in patients who are markedly strumous; at any rate not until this feature has been previously met with cod-liver oil, iron, etc.; but sometimes after these have done their work the disease remains, and arsenic is necessary to its removal. A striking instance of its very great power under these circumstances has been recently under my observation.

Mamie C., as strumous a child of three years as you often see, has attended quite faithfully at Demilt for fifteen months. She has light hair and eyes, and pale, delicate skin; the eyes have always appeared weak, she having strumous ophthalmia and a purulent discharge from the ears. From her admission to the dispensary, March 5, 1875, to October 30th, she was under varied treatment for an impetiginous eczema, involving the entire head and most of the face, but with hardly any success. She took an arsenical mixture for a time, and for the latter few months took cod-liver oil, to the manifest improvement of her health, but without affecting the eczema much; nor did it improve at all under the smaller doses of arsenic first given. She was then, October 30th, ordered Fowler's solution and cinnamon water, equal parts of each, taking at first four drops three times a day, increasing gradually to twenty, or ten drops of Fowler. This latter amount she bore well, and improved under it rapidly, with no change in the local treatment which had been previously employed; and within three months the eczema of nearly three years' duration was well.

I have administered arsenic in comparatively large quantities to children of very tender years, or rather months, who have had eczema, and must confess that I have sometimes been surprised at the results, so different were they from what the books indicate. I was led to use it alone in these cases, and in the large doses I mention, by a suggestion of my friend, Dr. Stephen Rogers, of New York, a man of large experience and uncommon acuteness, who detailed to me, a while ago, some very striking cases of its use, which I have since equaled repeatedly in my own experience, as the following testify:

J. D., an apparently healthy boy of eighteen months, had

a characteristic moist eczema of the right ear and side of the face, he having had the disease seven months. He was ordered equal parts of Fowler's solution and cinnamon water, and six drops of this was taken thrice daily with the food. If not disagreeing, the dose was to be increased to eight drops, or four of Fowler. Five days later the eruption was much better, having dried up by one-half; there had been *no local treatment whatever*. The medicine had not affected the stomach or bowels, which latter were still somewhat constipated. The dose was increased to ten drops, or five of arsenic, three times a day, and a good recovery was made. Ellen Laury, aged twenty-one months, had had eczema of the head for nine months; she was given the same with like results. Within five days it was recorded that there was not so much itching, and that the eruption was much better. Many such accounts could be given did space permit, though it is impossible to keep accurate records of the larger share of dispensary practice. I have administered arsenic to very many infants of all ages, from three and a half months upward, and have never yet seen any cause to regret it, or any evil consequences result. I speak this advisedly and after much thought; and, although I would not by any means encourage the indiscriminate deluging of every infant who has eczema with large doses of this poisonous mineral, still, in proper cases, as indicated by the preceding three states described as requiring arsenic, and observing the rules and precautions for its administration to be hereafter set forth, I believe that arsenic is not only harmless but highly beneficial, and I should be extremely sorry to be deprived of this means of treating infantile eczema.

Be it remembered, that in all this I do not draw back one whit from the position taken before this Association, two years ago, in my essay on the management of eczema. I am only speaking of proper cases, carefully studied, with a due regard to local and general causes of irritation, and with a diligent supervision of the diet and hygiene, and with such local and general measures as I then indicated, which I cannot here touch upon. It is true that the cases I have detailed were treated by arsenic alone—this I am not yet prepared to ad-

vise; they are recorded here only to demonstrate the power of the drug over the disease. I may mention that my friend, Dr. Daniel Lewis, of this city, has also treated infants on the plan detailed, at the suggestion of Dr. Rogers, and successfully; also, that my assistant, Dr. Robert Campbell, has witnessed the progress of many such cases; likewise a number of physicians who have attended my private classes at Demilt Dispensary. Wilson has no hesitation in prescribing arsenic for infants a few weeks old.[1]

But it will not infrequently happen while patients, especially these little ones, are taking arsenic, and the eczema doing well, that a bronchitis will supervene; and I agree with McCall Anderson,[2] that patients are more liable to catch cold while under arsenic. The medicine may then be suspended for a day or two, a good dose of calomel is given, one or two grains, repeated the next day, for an infant, and the cough will disappear, and the arsenic may be returned to. The same should be given if there is constipation; if diarrhœa occurs, diminish the dose or add opium.

Sometimes these interruptions appear more serious, and attention must be paid to them, and, of course, other diseases may occur, and complicate affairs greatly. The attendants are ever ready to attribute these and all troubles to a "driving in of the eruption," etc.; and, if it is known that arsenic is being given, constant fear of dangers from it will arise. Great annoyance may sometimes thus ensue, as in the following case, which was recently committed to my care by a prominent physician in a neighboring city, the family removing to New York temporarily for the sole purpose of having the child treated.

X., a fine-looking male child, eighteen months old, had suffered continuously from eczema of the head, face, and most of the body since six weeks of age. He had been under greatly varied treatment, and had tried most of the measures suited to such cases, having been under the care of seven physicians previously. When first seen, the child was in a

[1] "Lectures on Eczema," etc. London, 1870, p. 214.

[2] "A Practical Treatise on Eczema." Third edition, London, 1874, p. 99.

very distressing state, scratching continually and crying vociferously if prevented. The head and face were covered with moist and papular eczema, some portions scabbed and crusted; the legs were covered about the knees with the marks of scratching, thick yellow crusts, and various parts of the body exhibited subacute eczema in various states.

He was ordered about a grain of calomel two or three times a week (the bowels had always been constipated, and the urine high colored and passed frequently), and he was given an ointment containing a little tar and oxide of zinc. I prescribed also equal parts of De Valangin's solution of chloride of arsenic (which will be described later) and cinnamon water, of which he took four drops three times a day, with the meals, increasing it by one drop a day till eight were reached, or four of the arsenical solution. In three days there was great improvement, the relief to the child (and parents) being immense; he scratched hardly at all, and very much of the eruption had already disappeared. But the child had quite a fever and some vomiting, he having eaten something which disordered the stomach; the arsenic was therefore stopped, and a mixture of the acetates of potassa and ammonia and nitre was given. In three days the febrile movement had ceased, and the arsenic mixture was returned to at four drops thrice daily, to be increased slowly to eight. Nine days later it was recorded that there had been still very great improvement, the eight drops (four of arsenic) having been continued three times daily; they were then ordered to be increased to ten. The whole of the eruption was then dry, with slight scaling, and the little fellow made little or no attempt at scratching; this was fifteen days after beginning treatment, he having never been so well previously since the commencement of the disease.

He was then given some wine of iron, and subsequently some quinine, in very small doses, as a tonic, the appetite failing; but both seemed to disagree at once, and produce nausea and great prostration. The arsenic was stopped on the occurrence of these symptoms, but the mother begged a continuance of it, as she realized that it was controlling the disease. Nine days later, or twenty-four days after the first visit, the patient

be able to collect and present my statistics of the use of arsenic, now scattered over many public and private case-books.

Begbie states[1] that he has seen arsenic act through the mother upon a nursing child, four months old, with a diffuse eczema; the mother was kept under its influence to the extent of affecting the eyes and producing the arsenical tongue. McCall Anderson[2] also says that infants at the breast may be treated by means of arsenic administered to the mother; I have attempted this, but could never assure myself that the desired result was obtained by this or by other measures, as the regimen, etc., which were also directed. Ringer[3] states that arsenic may be detected in the milk; if so, the child can certainly be treated by means of it.

Mr. Jonathan Hutchinson, of London, asserts[4] very positively, that in arsenic we possess a very sure cure of *pemphigus*. I have used this treatment in three cases, with the best results. In the last case, a most severe one of pemphigus gangrenosus, the arsenic was given alone, and its power over the disease was very marked, arresting its progress within twenty-four hours, apparently saving the life of the patient. Although this statement of Hutchinson's is a reproduction of a previous one of his own, made twenty years previously, I find very few cases reported cured by arsenic,[5] and very little mention of this treatment in the text-books. I now prescribe arsenic in this disease with great confidence. Hutchinson says that it does not merely repress the eruption, but remedies the unknown constitutional cause on which that eruption depends, always very much benefiting the health of the patient. It does not, however, prevent the liability to subsequent attacks; but he states that such attacks are always much less severe than the original one, and

[1] *Edinburgh Medical Journal*, vol. iii., 1858, p. 964.

[2] "A Practical Treatise on Eczema." 3d edition. London, 1874, p. 100.

[3] "A Hand-Book of Therapeutics," 3d edition. New York, 1872, p. 243.

[4] *Medical Times and Gazette*, October 23, 1875 (*Practitioner*, December, 1875, p. 444).

[5] *Lancet*, February, 1859, p. 158, and *Medical Times and Gazette*, January, 1864, p. 10. (Stillé's "Therapeutics and Materia Medica." Philadelphia, 1864, vol. ii., p. 714.)

tend, if treated by the same remedy, to diminish in intensity on each successive occasion. He has recently reported a case of very severe pemphigus, in which arsenic appeared to prevent the patient's death.[1] It is not a little remarkable that Hunt does not appear to have tried arsenic in this disease; almost the only affection of the skin in which he has not reported its effects.

Of the value of arsenic in certain forms of *acne*, or, rather, in certain cases, I can speak with considerable positiveness. It certainly does, in proper cases and under proper conditions, exert a most marked influence upon the complexion of the face; an instance or two in proof of this: A gentleman, aged twenty-six, who for ten years had a most distressing eruption of indurated acne, which has left many scars, and who had been treated in many ways, has acquired a beautiful complexion, in about three months, under the use of De Valangin's solution of arsenic, in doses increased from five drops to sixteen, three times daily. Other treatment, lithia, Kissingen water, Baréges baths, etc., has been carried on previously, conjointly and alternately, but the same measures had never the same effect until the use of the arsenic. A young lady of seventeen, with acne simplex, who is still under observation, has obtained a smoothness and delicacy of skin from De Valangin's solution which she never had before. A lady of thirty-five, who has had acne rosacea for many years, finds that, after other treatment, the same arsenical solution in ten-drop doses has given her a complexion far better than she has had since the first appearance of the trouble. In a very marked case of hypertrophic acne rosacea of the end of the nose, in a man of forty years, there has been a diminution of the size of the swelling which is very evident, amounting to nearly one-third of the original size, under the internal use of arsenic, with local bathing in very hot water and a bismuth ointment, a drachm to the ounce.

I could readily give many other cases, but these are sufficient for illustration. Again, however, I must utter the caution against the indiscriminate use of this very powerful drug, and state, that it is only in certain cases, and after, or with

[1] *Medical Times and Gazette*, December 4, 1875.

other remedies, that arsenic can be of service; out of hundreds of cases of acne, I have given arsenic to but very few. As in eczema and psoriasis, so in acne, the patient is to be treated scientifically, and not the disease empirically; but, when it is decided to employ this remedy, rules must be observed, and its use persisted in, for its effects are manifested slowly.

I cannot state so positively from personal experience the value of arsenic in other diseases of the skin, but, from the improvement in the nutrition of the skin which I have seen in patients under its use, I am prepared to expect much more from it in proper cases than I was inclined to some years ago, or than most authors and practitioners experienced in cutaneous disorders are willing at the present time to admit. Whether I shall ever be able to indorse all that Mr. Thomas Hunt says of its action, I do not know; but he was a careful and conscientious clinical student, and his vast experience should encourage us to study our cases, and, when arsenic is suitable, to induce the patient to persist in its use, scientifically and intelligently managed, until results are obtained.

Mr. Milton, of London, agrees[1] with Mr. Hunt in regard to the efficacy of arsenic in *lupus*, and, from the recommendations of these gentlemen, we must believe that it possesses some controlling power over the disease, although other authors speak quite differently on the subject. Direct proof by capable witnesses must outweigh negative proof, however good; and the cases detailed by Hunt and Milton certainly encourage us to use this remedy in a disease which, though happily rare in this country, is exceedingly rebellious even here. I have used arsenic somewhat in lupus, but it was never faithfully tried, when compared to its use in Hunt's cases; and I am not willing that my negative testimony should have any bearing in the matter. Hunt states that, "in healthy subjects, arsenic internally administered is a specific" for lupus exedens, and that, in the non-ulcerating form, it will slowly arrest and modify the disease, and in some cases cure it; this without local applications. But, in one of his cases, arsenic was taken for two years with "*no appreciable improvement in the ulcer-*

[1] "The Pathology and Treatment of Diseases of the Skin." London, 1874.

ated surfaces,"[1] while, during the third year, the lupus healed entirely; it had already carried away much of the nose, upper lip, and gums of the upper jaw. Other cases yielded much sooner. Milton regards arsenic as the only remedy in lupus of the head or face, and thinks that the dose should be very large, so as to bring on a certain amount of constitutional disturbance.

There are few diseases requiring more widely different treatment than chronic *urticaria*, but there is good authority for saying that arsenic will control it when due attention has been paid to the removal of exciting causes.

Arsenic is certainly useful in the forms of disease coming under the head of *lichen*, that is, in its more chronic forms, although alkalies and other remedies are constantly called for as well. The ordinary chronic lichen, or lichen agrius, as described by older writers, and still recognized as distinct from eczema by the French and many of the English, and which I meet with constantly, yields very promptly to arsenic. In the *lichen ruber*, a rare disease in this country, but perfectly described by Hebra, the latter states[2] that there is no internal or external remedy which has appeared to influence the disease to the slightest degree except arsenic, and, on the other hand, that this remedy has never failed in cases in which it has been given in sufficient quantity. According to Hebra, it is necessary to administer it for many months—six to eighteen—not only until the disappearance of the disease, but for some time thereafter. He uses the Asiatic pills (to be described later), beginning with three daily, and increasing gradually up to ten or twelve a day, at which dose the arsenic is to be continued for months, and then reduced to six pills daily. "In this manner," says he, "some patients, even children from twelve to thirteen years old, have taken in the course of some months or years as many as thirty-five hundred Asiatic pills, equivalent to three hundred and fifty grains of arsenious acid, with the effect of removing the lichen ruber and restoring the nutrition of the body to a normal state.

[1] "A Guide to the Treatment of Diseases of the Skin," 8th edition. London, 1865, p. 164.

[2] "Lehrbuch der Hautkrankheiten." Zweite Aufl., Erlangen, 1874, p. 397.

We have never seen," continues he, " any ill effects therefrom. But little effect is produced upon the disease before the expiration of six weeks, and the use of from four to six hundred pills." Such statements, coming from Hebra, who is known chiefly by his disregard of internal remedies in treating diseases of the skin, are of interest and value.

I cannot further dwell on the special diseases of the skin in which arsenic has been prescribed, and for which it is recommended by those who have used the drug most, as Mr. Hunt, but may briefly mention them. *Ichthyosis*, in which others have found arsenic to fail, is said by Mr. Hunt to yield perfectly to it. I have exhibited it to several mild cases, more properly called *xeroderma*, and for a considerable length of time, without observing any effect from it, and should be inclined to doubt if it could ever affect the disease favorably. Hunt also reports most favorably of the use of arsenic in *sycosis*, and I have found it of decided service; that is, of course, in the form of sycosis which is not produced by a parasite. In an old and very obstinate case in a man aged thirty, arsenic in the form of De Valangin's solution, increased slowly until forty drops were taken three times a day, held the disease in check very perfectly, as was shown repeatedly when he omitted taking it for a little time, when the irritation would return and the disease increase. Epilation and other means of treatment were used, but the controlling power of the arsenic was manifest throughout the case. I will state, however, that the dose of forty drops of De Valangin was not well borne, but thirty-five drops three times a day were well tolerated. Finally Mr. Milton and Mr. Hunt, and perhaps others, declare that arsenic has great power over *warts*, especially when seated on the face. I have observed this to be true in one case; certainly some of the warts disappeared from the face quite rapidly without any other treatment save arsenic internally.

Having mentioned the diseases in which we may, on good authority, order arsenic with a fair prospect of having favorable results, I will briefly state in what affections the remedy is useless or harmful; we will then consider for a moment the physiological action of arsenic as distinguished from its toxic

effects, examining then the dangers to be apprehended; later its preparations and their doses; and finally will mention certain rules to be observed in administering this potent remedy.

First, then, syphilis in all its forms is uninfluenced by arsenic, except badly, and it should never be given unless called for by nervous symptoms or as a stomach tonic. The parasitic diseases, animal and vegetable, are equally beyond the power of arsenic; but here there is an exception, namely, that in certain cases of tinea circinata and tonsurans, the ringworm of the body and head, and in favus, where the disease is old, general, and deep-seated, arsenic may, by improving the nutrition of the skin, render it an unfit soil for the vegetable parasite to flourish in; ordinarily, however, its administration is entirely unnecessary.

Elephantiasis Græcorum, or true leprosy, cannot be benefited by arsenic. I do not know of its having been tried in the elephant leg or pachydermia, but presume that no results have been obtained, or we should have learned of it, the disease being so notoriously rebellious. Purpura, true prurigo, herpes zoster, scleroderma, molluscum contagiosum and fibrosum, keloid, and nævus, are all uninfluenced by arsenic, although Hunt gives a case of the latter which he states was cured by this mineral internally. In regard to cancerous diseases of the skin, and especially epithelioma and rodent ulcer, there is still some room for doubt, as certain authors think that they have seen benefit from the internal administration of arsenic in them.

And in this connection I may state concisely what I consider to be the present standpoint in regard to the external use of arsenic, and that especially in reference to the last-mentioned disease, epithelioma. There are two points of very great importance to be remembered in prescribing it locally, and these are, either to make the applications so weak and apply them so sparingly that no absorption can take place, or else, by a bold stroke, to apply the arsenic of such a strength as to kill at once the tissue, and so prevent absorption. Of the former I will not speak, as I have never yet used, and probably never shall employ, mild preparations externally, for we may not know where absorption has taken place until too late.

I may say, however, that it is altogether unjustifiable to use weak solutions or ointments of arsenic for the cure of the animal or vegetable parasite diseases, or as stimulants to large ulcerated surfaces, as has been done with alarming results. Stillé[1] gives some interesting particulars in regard to the dangers from the external application of arsenic, and there have been many fatal cases reported from the poison thus used.

But of the latter method I can speak with great assurance. I refer to that practised very largely, and recommended very earnestly by Marsden[2] in the treatment of certain forms of cancer, and to which my attention was called some years since by my friend Dr. Daniel Lewis, of New York, who afterward published some seven cases treated in this way.[3] Marsden recommends two drachms of powdered arsenious acid, with one of mucilage of gum acacia, to be mixed together and made into a thick paste. I have prepared it extemporaneously, using equal parts by weight of the white arsenic and powdered gum acacia, which I mix thoroughly, and then moisten with a drop or two of water at the time of application. This is to be spread on an epitheliomatous growth to an extent not exceeding a square inch at one application, according to Marsden (I have never used it to so large a space). When there is a large growth to be destroyed, successive portions may be attacked. A little cotton or lint is then packed on, the mass allowed to harden, and after eight or ten hours (Marsden says forty-eight) a flaxseed poultice is to be applied, and changed every two or three hours till the slough separates, which may occur in the course of a few days, sometimes not for two weeks or more. After this I continue poulticing the ulcer which is left, renewing the dressing every four hours, till perfect skin is formed, unless, as will sometimes occur, the destruction has not been deep enough, when the arsenical paste must be reapplied. The rationale is, as before stated, that absorption is prevented by the great strength of the application, and Marsden has never known

[1] "Therapeutics and Materia Medica." Philadelphia, 1864, vol. ii., p. 700.

[2] "On a New and Successful Mode of treating Certain Forms of Cancer." 2d ed. London, 1874, p. 83.

[3] *American Practitioner*, December, 1874.

serious consequences from it. I have employed it repeatedly during the last three or four years, and consider it perfectly safe when used as described; I would, however, advise the reading of Marsden's little book before the treatment is entered upon. I hesitate to speak of other strong preparations of arsenic for external application, for which there are many formulæ recommended, because I have never used them, and, although my fears of absorption from weaker preparations than the one I have mentioned may be too great, I prefer to err on the safe side, and would, therefore, refer those interested to the various standard authors for an account of their preparation and use.

A moment may now be given to the physiological and toxic effects of arsenic preparatory to a study of its preparations and doses, and the rules for administering it. The immediate poisonous effects of large doses of arsenic are familiar to all, and need not occupy us here; death occurs, as is known, from paralysis of the heart, where very large quantities are absorbed, or, there is inflammation of one or more of the abdominal viscera, which may prove fatal; or, there may be some later affection of the nervous system—paralysis, etc.—which sometimes terminates life; these results are proportionate to the quantity taken, or rather the amount absorbed. Taylor states the smallest fatal dose at 2 grains, Tardieu at 1.54 to 2.31 grains.[1] The symptoms, of course, vary with the case, but in the main they can be divided into the three classes above given when death is the result.

Now, what do we know with reference to poisoning by the slower introduction of the mineral, or when the effect is produced by other than a single large dose introduced into the stomach? The symptoms given by Stilié,[2] in cases where nine men swept up some arsenic scattered in the hold of a vessel, were as follows: several were seized with vertigo and fell senseless; they were then attacked with vomiting and other symptoms of arsenical poisoning; two or three of the

[1] Wood. "A Treatise on Therapeutics." 2d ed. Philadelphia, 1876, p. 363.

[2] "Therapeutics and Materia Medica." 2d ed. Philadelphia, 1864, vol. ii., p. 702.

nine cases proved fatal in a few days. From arsenical fumes the following symptoms have been observed: debility, dyspnœa, præcordial pains and constriction, with severe cough, headache, pains in the limbs, muscular spasms and paralysis, thirst, nausea, vomiting, dryness of the mouth and fauces, and colic. Similar effects to a greater or less degree have been recorded as resulting from green paper-hangings on rooms,[1] also from certain colorings used in the manufacture of artificial flowers, fancy boxes, etc. Articles of dress have likewise been found to contain sufficient arsenic as a dye or mordant to produce the same in milder degree.[2]

I have seen similar conditions in the case of a woman who sat in a room which had been well strewn with Paris-green to destroy vermin. I have very recently met with a most interesting case where almost the first sign of arsenical poisoning was the development of a small, discrete pustular eruption, tending to ulceration on the arms and legs; all the other ordinary symptoms appeared shortly thereafter. The patient was a powerful, healthy man, who had been for one week employed in handling Paris-green, dealing it out in large quantities, principally for use against potato-bugs. He worked very hard and sweated profusely, and the room was constantly filled with the dust of the arsenic. At the end of the week he was completely prostrated. The subject of the dangers of the use of arsenic in agriculture has been considered very fully by Dr. Kedzie, of Michigan,[3] and is one which health authorities should take cognizance of.

Let us now turn to see if any such symptoms as those described are ever, or need be ever, called forth when arsenic is given medicinally and guided by an intelligent hand. There is always a physiological warning given by arsenic when thera-

[1] For an account of the dangers from arsenical wall-papers, *see* Dr. Kedzie's report, "Second Annual Report of the Secretary of State Board of Health of Michigan." Lansing, 1875, p. 55. Also, an article by Dr. Brown, of Boston, *Boston Medical and Surgical Journal*, May 11, 1876, pp. 529 and 544.

[2] *British Medical Journal*, November 21, 1874 (*Monthly Abstract of Medical Science*, January, 1875, p. 45).

[3] "Third Annual Report of Michigan State Board of Health." Lansing, 1876, p. 13.

peutically administered, which I do not find regarded by any one as one of its toxical effects, and that is the affection of the conjunctiva, with which all are conversant. After the administration for a while of a full medicinal dose, say from three to five drops of Fowler's solution, or more, that is, from $\frac{1}{40}$ to $\frac{1}{10}$ of a grain of white arsenic three times a day, a prickling sensation is felt in the tarsi, and the conjunctiva becomes slightly inflamed, especially at its middle zone, and on the inside of the lower lid, and there occurs some puffiness beneath the eyes. Hunt, whose experience in arsenic probably surpasses by far that of any other practitioner, states that this slight conjunctivitis takes the precedence of more grave symptoms in about forty-nine cases out of every fifty.[1] Gailleton also confirms this.[2] Hunt further says, "both the safety of the patient and the prospect of his recovery will depend upon the vigilance with which this fact inspires the surgeon. Ignorance of the existence of this safety-valve has caused many a cautious practitioner to repudiate the medicine altogether; and an acquaintance with this important sign would, doubtless, on the other hand, have checked the temerity which, in its results, has attainted with unmerited suspicion the reputation of a valuable remedy."

It is needless to remind you that there is not the slightest danger to be apprehended from this slight conjunctivitis, which passes away spontaneously on a cessation of the remedy or lowering of the dose. It is often necessary to continue the conjunctival irritation for a long time, but it need never be carried to such an extent as to cause much physical uneasiness to the patient.

All observers who have studied the effects of arsenic in medicinal doses agree that the other symptoms liable to occur are as follows: a certain amount of nausea, and occasionally vomiting, when an overdose is reached, or even a slight diar-

[1] "A Guide to the Treatment of Diseases of the Skin." 8th ed. London, 1865, p. 119.

[2] "Traité Élémentaire des Maladies de la Peau." Paris, 1874, p. 67. This is likewise shown in the elaborate study of arsenic by Imbert-Gourbeyre, "Études sur quelques Symptomes de l'Arsenic et les Eaux Minérales Arsénifères. Paris, Delahaye, 1863.

rhœa, possibly a little fullness of the head, and constriction of the chest, and very occasionally tingling of the extremities, and anorexia. All these, however, are trivial, and pass away with the suspension of the remedy. Some writers describe a number of eruptions occurring from arsenic—erythema, urticaria, herpes zoster, furuncles, etc.—but none of these are common; I have never met with them among the hundreds to whom I have given arsenic. I have, it is true, seen an acute papular eruption affecting the upper part of the body when taking arsenic for localized eczema elsewhere, but cannot believe that it was other than an acute papular eczema, there being no other signs of an overdose of the mineral. I have also seen herpes zoster develop while under arsenic, but neither can I attribute this eruption to the drug for the same and other obvious reasons. I have already recorded a general pustular eruption in a patient poisoned by arsenic, but much of this was local, on parts exposed to the dust of the Paris-green.

The only pathological change in the skin produced by arsenic taken medicinally, which is at all common, I believe to be the brown, pityriasic staining, described as a dingy, unwashed appearance, affecting the protected parts of the body. As far as I have observed it, it appears to resemble somewhat the ordinary chloasma, though less marked, found also in those who have taken no arsenic; undoubtedly in some instances both chloasma and the brownish tinea, or pityriasis versicolor, the parasitic disease, have been mistaken for it.

Finally, Weir Mitchel,[1] eleven years ago, reported two cases, one of which was very striking, where a temporary albuminuria attended the œdema following arsenic used therapeutically, but I have not been able to find any further illustrations of this by others.

The question now arises whether there is any danger to the general health from the long-continued use of this drug even in medicinal doses, a question continually asked by patients when aware that they are taking arsenic, and one of vital importance to the practitioner as well. Hunt reports,[2]

[1] New York Medical Journal, vol. i., 1865, p. 169.

[2] *Journal of Cutaneous Medicine*, vol. ii., pp. 144, 249, 350.

from a survey of upwards of fifteen thousand recorded cases, and after having administered not less than five hundred gallons of arsenical solution in ten years' dispensary practice alone, that he has never seen any deleterious effects. Some of the patients took arsenic almost continuously for seven years together and not one with a result to be regretted. Says he,[1] "I have now administered arsenic for months or years together in many thousands of cases, and have watched in vain for the alarming effects attributed to its use. During more than thirty years' observation I have rarely known it to produce any unpleasant effects on the system in a degree incompatible with perseverance in its use; and I have taken pains to make extensive inquiries among more than a hundred of my professional brethren most familiar with its use. The British Medical Association, in 1848, addressed questions to its members and obtained replies from seventy-five practitioners who had used arsenic largely as a medicine and whose cases amounted in the aggregate to several thousands. Yet, in their answers to special inquiries, it appeared that not one of these practitioners had ever found the medicine either fatal or permanently detrimental to health." I have already given Hebra's experience with arsenic in lichen ruber in very large doses and for long periods, with only benefit to the patient's health; more than half an ounce in all of arsenious acid having been taken by a single patient. I may mention that in psoriasis he continues the same treatment for months,[2] and states that many patients have taken as high as two thousand pills, containing a total of two hundred grains of arsenic. Veil[3] reports the use of arsenic in seven hundred cases of skin-disease without a single untoward symptom or result. Romberg, who used arsenic greatly in nervous diseases, says:[4] "The proper precautions being used, I have never seen the slightest evil result occur, even in children, from the use of arsenic."

[1] "Diseases of the Skin," eighth edition. London, 1865, p. 16.

[2] "Lehrbuch der Hautkrankheiten." Zweite Aufl., 1874, Bd. I., p. 365.

[3] "Würtemb. Corr. Blt.," No. 24, 1860. (Sydenham Year-Book, 1862, p. 415.)

[4] "A Manual of the Nervous Diseases of Man." Syden. edition. London, 1853, vol. ii., p. 74.

Hunt states in italics, that "*the reputation of arsenic as a slow poison in medicinal doses rests upon no evidence whatever.*"

A demonstration of the safety of arsenic, when taken in quantities suited to the system, is found in the practice of arsenic-eating in Styria,[1] the verity of which is accepted by Stillé,[2] and which has been recently confirmed by Dr. Knapp.[3] This latter gentleman saw a healthy man of seventy, who had taken arsenic for forty years, and reports other very interesting points in regard to the tolerance of the mineral.

Another illustration of the safety of arsenic, suggested by Mr. Hunt, is as follows: The medicinal dose of arsenic averages one-twenty-fourth of a grain, and the smallest recorded fatal dose is two grains, or about fifty times the amount generally required in medicine. There is no other remedy where such a proportion is borne; imagine the effect of fifty times the dose of any ordinary medicine, or two to five hundred grains of calomel, fifty to one hundred of opium, thirty ounces of sulphate of magnesia, fifteen or twenty grains of morphia, half an ounce of quinia, and so on.

Space and time forbid my seeking further proof of the safety of arsenic when properly administered, and I will only add that I have prescribed it myself in very many cases for the past eight years, and have yet to regret its use. I have glanced over my public and private records during the past year and a half, and find that I have ordered it for between two and three hundred patients during this period, in quantities varying from the minimum dose to forty drops of De Valangin's solution and twenty of Fowler. I have always directed it to be taken three times a day; in many instances it has been continued for months, and I have patients who have taken it for years, not only without injury to the health, but generally with

[1] *Edinburgh Medical Journal*, June, 1860, p. 1137; and *Medical Times and Gazette*, November 17, 1860, p. 494. ("Sydenham Year-Book," London, 1861, p. 61.)

[2] "Therapeutics and Materia Medica." Second edition. Philadelphia, 1864, vol. ii., p. 704.

[3] "Versamm. deut. Naturf. u. Aerzte zu Graz," *Allg. Med. Chir. Zeitung*, Beilage zu No. 97, December 4, 1875. (*Boston Medical and Surgical Journal*, May 11, 1876, p. 546.)

marked benefit. The youngest patient to whom I have administered arsenic during the last year and a half was aged three and a half months, and I find many recorded at four and five months of age, and from that upward. I am aware that Ringer[1] gives a more serious picture of the effects of long-continued doses of arsenic, but I cannot imagine that he has reference to its therapeutic use by intelligent physicians; if so, where does he obtain his clinical evidence? It will be understood, of course, when I speak of the safety of arsenic, that it is in proper doses suited to the particular individual, for, as mentioned elsewhere, the dose is not always the same, and it is also with the understanding that the rules for its administration are followed, and that the earlier manifestations of its physiological action are always heeded, otherwise serious results may occur, which is true as well of any other medicine. It is not to be denied that serious results have followed the use of arsenic as a medicine,[2] but to a less degree, I firmly believe, than is true of any other remedy of equal potency.

Arsenic is eliminated very rapidly, chiefly by the bowels and kidneys. Majer states[3] that arsenic always appears in the urine from six to twelve hours after a dose, and disappears in four to six days after leaving off the remedy. Two-thirds of the quantity taken is thus excreted. Hunt states that, in the case of a man who had taken arsenic for about a year, no trace of the mineral could be found on careful analysis of the body after death, which occurred two weeks after the last dose. Bodies of animals examined by Danzer and Flaudin three days after the last dose of arsenic, of which fifteen grains had been given daily, gave no trace of the drug.[4]

The United States Pharmacopœia[5] recognizes seven forms of arsenic, as follows: arsenicum, acidum arseniosum, arsenici iodidum, liquor arsenici et hydrargyri iodidi, liquor arsenici

[1] "A Hand-book of Therapeutics." Third edition. New York, 1872, p. 236.

[2] Stillé, *loc. cit.*, vol. ii., p. 705.

[3] *Würtemb. Med. Corresp. Bl.*, No. 13. ("Sydenham Year-Book," London, 1862, p. 230.)

[4] *Journal of Cutaneous Medicine*, vol. ii., p. 149.

[5] Fifth revision, 1874.

chloridi, liquor potassæ arsenitis, and liquor sodæ arsenitis; besides these, there are found in the Dispensatory:[1] arsenic acid, arseniate of ammonia, of iron, and of quinia, also the bi-sulphuret and ter-sulphuret of arsenic.

The metal arsenic is not given internally. Arsenious acid seems to be borne in larger doses when given alone than when combined with alkalies or acids, and, according to Hebra, the dose of one-tenth grain may be given in pill three times daily, increased, as we have seen, by him, to ten or twelve such pills in the twenty-four hours. Arsenic is usually given in this form in the East, and Hebra rarely employs any other. It is a safe and often convenient form in which to give arsenic, but is seldom employed in this country or in England. Hebra's formula for Asiatic pills[2] is to mix sixty grains of arsenious acid with six drachms of powdered black pepper, and divide the mass into six hundred pills, each thus representing one-tenth of a grain of arsenic. Neumann gives this prescription:[3] arsenious acid sixty-six grains, black pepper nine drachms, divide into eight hundred pills; each pill containing .08, or about $\frac{1}{12}$ grain of arsenious acid. Neligan states[4] that each Asiatic pill should contain about one-thirteenth grain. As no formula is given in the Dispensatory, care must be exercised, in ordering Asiatic pills, to state the quantity in each; it were safer to commence with a smaller dose than Hebra gives. Frequently arsenious acid is better tolerated when combined with opium, thus: ℞. Acid. arsen., gr. j; pulv. opii, gr. iv. M. Div. in pil. No. xvi. When used in solution, arsenious acid should be ordered first, in the dose of one-twentieth grain, three times daily.

The iodide of arsenic is seldom now used internally, although the late Dr. A. T. Thompson prized it, and Neligan[5]

[1] "The Dispensatory of the United States of America." Twelfth edition. Philadelphia, 1867.

[2] "Lehrbuch der Hautkrankheiten." Zweite Aufl., Erlangen, 1874, Band I., p. 365.

[3] "Lehrbuch der Hautkrankheiten." Third edition. Wien, 1873, p. 266.

[4] "A Practical Treatise on Diseases of the Skin." Philadelphia, 1852, p. 186.

[5] *Loc. cit.*, p. 185.

recommends highly what he calls the iodureted solution of the iodide of potassium and arsenic, after the following formula: ℞. Liq. potass. arsenit., ♏ lxxx; potass. iod., gr. xvi; iodi. pur., gr. iv.; syr. flor. aurant., ℥ ij. M. Each drachm of this contains five minims of Fowler's solution. Iodide of arsenic may be well given in pill form, one-twelfth to one-eighth grain, gradually increased.

Of the next officinal preparation of arsenic, Donovan's solution, the liquor arsenici et hydrargyri iodidi, Mr. Hunt remarks: "If there be any medicine more dangerous and unmanageable than another, it is that villainous compound of arsenic, iodine, and mercury, known by the name of Donovan's solution," an opinion which many others share. I never prescribe it, for I have abundantly witnessed its inefficacy and ill effects in patients who have taken it previous to coming under my care.

The liquor arsenici chloridi, recently admitted into our Pharmacopœia, is intended to replace the old English preparation frequently referred to in this paper, De Valangin's solution of the chloride of arsenic, the *solutio solventis mineralis*. The formula for this latter was given in the twelfth edition of the Dispensatory, 1867, under the present title, liquor arsenici chloridi, but its strength is only about one-third that of the accepted officinal solution. I would call especial attention to this fact, as all my cases here referred to, and those mentioned by Hunt, Milton, Gaskoin,[1] and perhaps others, were treated by the solution made from the old formula, where there is only one and a half grains to the ounce, and twenty minims contained but one-sixteenth of a grain of arsenic; whereas the present solution is of the strength of four grains to the ounce, to correspond with the other arsenical solutions, and twenty minims represents one-sixth grain, instead of one-sixteenth, as heretofore. I will also direct attention to the formula for the liquor sodæ arsenitis, which is now fixed at four grains to the ounce, while Pearson's solution, as originally used, contained but one grain to the ounce, or one-fourth the present officinal amount. We cannot be too careful in handling severe and potent remedies.

[1] "On the Psoriasis or Lepra." London, 1875.

De Valangin's solution, or the liquor arsenici chloridi, I consider, in some respects, to be the best form in which to introduce arsenic into the system, although I would by no means neglect other preparations, and this solution is much recommended by Hunt, Milton, and Gaskoin, and Wilson places it first in his formulæ for arsenical remedies. The reason of its superior efficacy is probably because the arsenic is united with hydrochloric acid, which corresponds to the normal stomach acidity.

These three officinal solutions, just mentioned, being of equal strength, we may consider their action together: they are, I believe, each one suited to fulfill different ends, and are all of great value. I will introduce into this group a fourth preparation, now almost forgotten, but used with advantage by Biett, and which will, on occasion, serve a good end, namely, the arseniate of ammonia. It is described in the Dispensatory, where a solution of a grain to the ounce is directed, of which from twenty to twenty-five drops may be given; it were better to make the solution of the same strength as the others, four grains to the ounce, and prescribe it in the same doses as the other solutions.

The liquor arsenici chloridi, then, is of more especial service where an acid is called for by the general state of the system, and it may often be advantageously combined with muriatic and nitro-muriatic acid, also with the muriated tincture of iron. Fowler's solution is applicable where potash salts are required, and is often very happily united in the same prescription with liquor potassæ, acetate of potassa, etc.; the solution of the acetate of soda is the same in reference to soda salts, and the arseniate of ammonia has its functions to fulfill, when salts of ammonia are wanted, and may be well prescribed with the aromatic spirits of ammonia, liquor ammoniæ acetatis, etc. Now, it is no idle matter, whether a patient with a disease of the skin receives muriatic acid, potassa, soda, or one of the salts of ammonia; and I believe we will get far better results if we will have more in respect the state of the system at large and its demands. For this reason, therefore, I think we should study a case of skin-disease, and, when we deter-

mine that arsenic is called for, seek that preparation best adapted to the exigencies of the case.

To conclude the list of the preparations of arsenic and their uses: Arsenic acid has therapeutic effects similar to those of arsenious acid, but is more poisonous; the dose is one-twentieth of a grain, in aqueous solution, but I do not know of its having been ever prescribed in diseases of the skin; Garrod believes[1] that it is less irritating to the stomach, and can be prescribed in larger quantities than other preparations. Of the arseniates of iron and quinia I cannot speak from experience, and can find but little in regard to their use;[2] the former is officinal in the British Pharmacopœia, and the formulæ for both are found in the United States Dispensatory. Good results might be expected from these combinations, but the iron and quinia are in such small quantities that their action must be quite insignificant. The dose of the arseniate of iron is from one-tenth to one-eighth of a grain, in pill, three times daily; of the arsenite of quinia, one-third of a grain may be given at once. I do not know of either the bi- or ter-sulphuret of arsenic being used internally in skin-disease; the latter orpiment, or King's yellow, is employed considerably as an ingredient of depilatory powders, and is quite safe when thus used under medical guidance.

A new preparation of arsenic has recently been introduced, especially in the treatment of nervous affections, in which phosphorus is combined with the chloride of arsenic, after the following formula by Routh: ℞. Acidi arseniosi, gr. j; phosphori, gr. one-sixth; acidi hydrochlor. dil., ℥j. M. It is known as the solution of the chloro-phosphide of arsenic, the dose being, for an adult, fifteen to twenty minims, thrice daily. It promises well in diseases of the skin of a nervous type. The arseniate of antimony has been employed in certain diseases, but I have not yet learned of its use in those affecting the skin.

A word may now be said, in general, relative to the dose

[1] Reynolds's "System of Medicine," Philadelphia, 1868, vol. i., article "Gout," p. 887.

[2] Duchesne Duparc. *Gazette des Hôpitaux.* (*Braithwaite's Retrospect*, January, 1855, part xxx., p. 175.)

and mode of administering arsenic. The common practice, as is well known, is to give a small dose at first, say three drops, more or less, of Fowler's solution, or its equivalent, and then to increase the dose slowly until some of the physiological symptoms are manifested; then to lower the dose just sufficiently that it may be well tolerated. This is the plan recommended by many authors, and is the one which I have often followed, as is shown in the cases detailed. But Hunt, who is so justly quoted in everything pertaining to arsenic, regards the rapid increasing of the doses, recommended by some, as a serious error, and proceeds in an exactly opposite manner. He orders a pretty full dose, say, five minims of Fowler, at once, and persists in it for a fortnight or three weeks, and, if it produces no sensible effects, he then increases, say, by one-fifth of the dose once or twice a month until the remedy begins to assert itself, when the full dose may be considered as arrived at, and is to be persevered in without further increase. He does not produce any great amount of disturbance, but does keep the eyes slightly tender. A third plan is, to give only small doses, not sufficient to produce any of the symptoms of arsenic, and to continue them without increasing.

Hunt's plan does not differ much from that first mentioned, except that he gives larger doses at first, and increases more slowly. Inasmuch as some persons are readily affected by arsenic, it is safer, I think, to commence with the smaller dose, and not to increase very rapidly. I believe, however, that very commonly all the effects of the drug can be obtained from small doses, long persisted in, without much increase.

I have never met with any of those cases which are said to be so very susceptible to the action of arsenic, although such undoubtedly exist, and it must always be borne in mind that the dose of arsenic may vary for different individuals and cases, just as does that of any other remedy. Mr. Hunt h known one-fourth of a minim of Fowler's solution, thrice dail to cure psoriasis in a delicate female, whereas some patien as in the instances I have given, tolerate very large doses w impunity and with benefit.

But arsenic, when administered medicinally, should taken with the utmost regularity, and I must earnestly

dorse the following, from Mr. Milton:[1] "The plan, once decided upon, should be regularly and consistently carried out, and, if any interruptions be thought requisite, they should only be made on really valid grounds, and be as systematic as the rules for taking the medicine. The surgeon may often suspend the arsenic with advantage; the suspension of it by the patient without orders can scarcely fail, sooner or later, to retard the cure. If the patient will give up arsenic whenever he is going out to see his friends or when he has friends coming to see him, when he is away on business or pleasure, when he is tired of taking medicine or fancies that it may not agree with him, in short, if he will take it in any way but the right way, he had better not take it at all."

Arsenic should never be intrusted to a patient for a long time to use at his own discretion; those taking it should be carefully watched and seen very often; some insist on seeing patients who are under its use every few days, and seldom should the intervals of time be marked by weeks, never by months; for, while in very many instances all is well and no change need be made, the medical judgment alone can tell if the effects are bad or good, for it is not possible to foreknow its action in every case.

It is often advisable and necessary to give arsenic in a concealed form, for many patients who have once tried it, however unfaithfully, will not have confidence in it again, and many will fancy that they cannot take it, or if they are aware of its use they very readily imagine many of the symptoms which are liable to occur. We are, therefore, justified in concealing the fact, if possible, for, as McCall Anderson remarks,[2] "All that our patients can ask of us is, to do everything in our power to benefit them," and I myself cannot see wherein it concerns them what the remedy is.

For this and other reasons it will often be convenient to give arsenic in pill-form. Any of the solutions may be thus prescribed very conveniently by having the requisite quantity

[1] "The Pathology and Treatment of Diseases of the Skin," London, 1872, p. 6.

[2] "A Practical Treatise on Eczema," etc., third edition, London, 1874, p. 103.

of the liquid for a given number of pills mixed with some inert powder or with other ingredients, so as to make a soft paste; this may then be dried on a water-bath until of proper consistence, and afterward be divided into the desired number of pills. I have used this method of administering arsenic considerably, and am much pleased with it; I thought the idea was original to myself alone, but I find that Gaskoin mentions it in regard to Fowler's solution. Arsenious acid is furnished in pill-form in various doses, alone and combined with other remedies, by some of our manufacturing chemists, and some of the compound formulæ might be of service when it is desirable to give arsenic unknown to the patient.

Arsenic should always be given with or immediately after meals and not before, as the habit with some is. (There are, of course, exceptions to this rule, as we know that in certain forms of dyspepsia it answers best on an empty stomach.) I much prefer administering it during the meals, and I have the dose placed in the glass of water which is to be drunk during the meal, or in a separate wineglass. For this reason it is often better to separate the arsenic and put it in a watery solution, say of a strength so that ten drops or minims shall contain one of the arsenical preparation, then thirty, thirty-five, forty, forty-five, and so on, minims may be given. By this means the dose is varied with greater exactness than if the arsenic alone was dropped out; also there is less danger of mistake, as each minim represents but one-tenth the amount of the pure solution. Arsenic should never be given to the patient in the pure officinal solution, with directions to drop it out, as the drops vary so much with the size and shape of the edge from which it is dropped; in the plan proposed of giving it diluted, it is also much better to insist upon the patient having a minim glass and measuring the dose. It will sometimes be of advantage to add a small amount of an appropriate acid or alkali to each dose; thus the remedy is given in a form much like the natural arsenical waters, with which I have no personal experience, but which are highly prized by some.[1] I agree most heartily with many other writers in

[1] "Note sur le Traitement de l'Eczéma et du Psoriasis aux Eaux Arsénicales de la Bourboule," Paris, Asselin., 1876; also Wilson, "On Diseases

omitting the nauseous and useless compound tincture of lavender from Fowler's solution.

One more method of administering arsenic remains to be mentioned, and that is, by hypodermic injection. This has been safely and successfully practised by Lipp,[1] in psoriasis and chronic eczema, who used arsenious acid dissolved in distilled water, with heat (gr. iv ad ℥j). He injected from one-twentieth to one-fifth of a grain once daily, or omitting a day or two, and obtained the distinct, constitutional effects of arsenic from the larger doses; the smaller doses were quite safe. There were no abscesses, and but moderate inflammatory action at the site of puncture. Radcliffe[2] injected Fowler's solution about every other day, increasing the dose from five to fourteen minims, with the result of curing chorea; and in neuralgia the same was injected in doses increasing from ten to thirty minims. This method may prove useful in some cases of skin-disease, as in severe pemphigus, threatening life, where the drug could not be given internally; also in other diseases where the stomach will not retain it, or where it fails to act when introduced by this channel.

In regard to the principles or rules to be observed in the use of arsenic therapeutically, they may, in the main, with what has preceded, be summed up as follows:

1. Arsenic, when administered in medicinal doses, has quite another action from that manifested by poisonous doses; the average dose of the former is one twenty-fourth of a grain of arsenious acid, while the smallest toxic dose is stated at two grains.

2. Arsenic in medicinal doses does not produce any slow poisoning, but has been administered for months or years in quantities a small portion of whose aggregate amount would destroy life at once. Hebra has administered a total of more

of the Skin," London, 1867, p. 125; also, Diday and Doyon, "Thérapeutique des Maladies Vénériennes et des Maladies Cutanées. Paris, Masson, 1876, p. 870.

[1] *Archiv für Dermatol. und Syph.*, vol. i., p. 362.

[2] Waring's "Practical Therapeutics," Philadelphia, 1874, third edition, p. 108.

than half an ounce to a single patient. The accounts of the toxiphagi of Styria are true, and arsenic is eaten by some for many years without apparent ill effect.

3. Arsenic given by a careful practitioner, in doses to be effective, need never produce any symptoms which should cause regret.

4. Arsenic is eliminated very rapidly, chiefly by the bowels and kidneys, so that the urine shows evidences of it in a few hours; no trace of it can be found on careful analysis of the body after death, two weeks after the last dose of arsenic.

5. Arsenic, therefore, does not accumulate in the system, and no fear of this need be entertained; but when it is administered in increasing doses absorption may be hindered, and, when the doses become very large, active absorption of the large dose may give rise to a suspicion of cumulative action.

6. The first symptom of a full dose of arsenic, in a very large share of cases, is a fullness about the face and eyes, and conjunctival irritation and tenderness. This need not be exceeded, but may often be kept up with advantage to a slight degree till the disease yields. Before any harm is done by the arsenic, either this or a slight nausea or diarrhœa manifests itself.

7. Arsenic should always be given with or just after meals; it is often best to give it alone, or with a small amount of bitter infusion.

8. The bowels should be first well purged, and an occasional laxative will both assist the action of the drug and prevent or modify some of its unpleasant effects.

9. If the urine becomes loaded and the tongue coated, it is best to stop the medicine for a short time and give diuretics; some of these disturbances can be prevented by combining an alkali, as acetate of potassa, carbonate of soda, or aromatic spirits of ammonia, with the arsenic.

10. The most serviceable forms in which to use arsenic, named in the order of their value, are: solution of the chloride of arsenic, solution of the arseniate of potassa, that of the arseniate of soda, and the arseniate of ammonia, arsenious acid,

iodide of arsenic, and the arseniates of iron and quinia; of as yet untried efficacy, solution of the chloro-phosphide of arsenic and arseniate of antimony.

11. The dose of arsenic, small at first, is to be increased slowly until some of its physiological effects are manifested or the disease yields; it may then be somewhat diminished.

12. It is very important that arsenic be taken very regularly and persistently, and always under the supervision and frequent inspection of the physician.

13. Arsenic is valuable in chronic rheumatism, hence is useful in arthritic eruptions; it is serviceable in certain neuroses, as chorea and neuralgia, therefore in skin-diseases with neurotic elements; and it possesses anti-malarial properties, and is consequently serviceable in diseases of the skin showing periodic symptoms, as intermittent urticaria, etc., likewise in patients with other skin-diseases who have been exposed to miasmatic influences.

14. Arsenic is certainly valuable in psoriasis, eczema, pemphigus, acne, and lichen, in proper cases and when due regard is paid to the secretory organs, and to diet and other elements of general health; of less certain value in lupus, ichthyosis, sycosis, verruca and epitheliomatous and cancerous diseases; it is absolutely useless or harmful in the syphilodermata, the animal and vegetable parasitic diseases (except in rare cases), in elephantiasis Græcorum and Arabum, in purpura, true prurigo, herpes zoster, scleroderma, molluscum contagiosum and fibrosum, keloid, vitiligo, nævus, etc.

15. The only local application of arsenic which is justifiable is either one where the strength is so weak, and the extent of its use so small, that there is no danger from absorption, which may occur when not expected, or, one of such a strength as to kill the adjoining tissue at once, and so prevent absorption, as is the case with Marsden's mucilage.

ON THE USE OF SULPHUR AND ITS COMPOUNDS

IN

DISEASES OF THE SKIN.

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ON THE USE OF SULPHUR AND ITS COMPOUNDS IN DISEASES OF THE SKIN.*

FIFTY years ago such a paper as the present one would have seemed superfluous, for sulphur was universally recognized as "good for diseases of the skin," very little attempt being then made to separate and differentiate the maladies of this organ, which are now so clearly distinguished. It is not very long since a lecturer, with more wit than knowledge, said that there were three classes of skin diseases; the first sulphur would cure, the second mercury would cure, and the third the devil himself could not cure.

Modern dermatology has made vast advances since those days, and this branch, so far from being the *terra incognita*, has become one of the most, if not the most developed branch of medicine; a larger number of distinct diseases are perfectly recognized as affecting the skin than any other organ, their differences clearly established, and the therapeutics of this branch will yield the palm to that of no other department.

There are, however, many difficulties inherent in the study of diseases of the skin which have in time past prevented the general practitioner from acquiring a perfect knowledge of this branch; chief among these has been the difficulty of observing cases in sufficient numbers to become familiar with the appearances presented. This, together with the vastness of the subject, must still be an obstacle before many, but to those who will search for and improve the opportunities offered by the large classes of skin patients in the dispensaries of the cities, much of the apparent difficulty in recognizing and classifying diseases of the skin will pass away.

This much is premised, because in my attempt to indicate concisely the true value of sulphur in diseases of the skin I shall be obliged to be very brief in allusions to diseases, and the whole value of my remarks as applied to practice will, of course, depend wholly upon accuracy of diagnosis in individual cases. To prescribe sulphur or arsenic simply because the skin is diseased, would be as irrational as to appropriate any other remedies to any special organ of the body, as, for instance, to give digitalis whenever the heart was affected. Four years ago the writer had the pleasure of present-

* Read at the thirty-first annual meeting of the American Medical Association, June 3, 1880.

ing before this Association a study on the use and value of arsenic in diseases of the skin, in which he endeavored to clear up the subject, by defining clearly what arsenic would accomplish in certain diseases, and in what affections it was useless or harmful. The aim of the present study is similar in regard to sulphur and its compounds, which, while of much service if rightly applied, are worse than useless if wrongly employed.

In studying the subject, we will for clearness separate the internal from the external use of the remedies considered, and will speak of each in turn. We have also to consider the following points: first, sulphur alone; next, as combined with other drugs; then of its compounds; and, lastly, of mineral waters containing sulphur.

Sulphur is one of the oldest remedies used in medicine, and it was early employed in diseases of the skin, and has long held its popularity as being "good for skin diseases." The reason of the great reputation of sulphur in this class of affections was undoubtedly because of the remarkable results which followed its use in scabies, and as the real nature of the disease and its cause was unknown, it was readily supposed that it should be equally effective in all skin affections, and it was also supposed that an agent which acted so well externally should be of further assistance when administered internally. Numbers of books have therefore been written upon the external and internal use of this remedy, and of course vast claims have been made for it, which in the light of today appear ridiculous. But we will find that sulphur with its compounds still plays an important part in cutaneous therapeutics when rightly and intelligently used.

Pure sulphur is seldom given alone internally, and is not generally thought to have much, if any, effect in diseases of the skin; its internal administration is commonly confined to its use as a laxative. I can, however, speak very highly of it in eczema about the anus and genital region, especially when this is, as is most frequently the case, associated with constipated bowels and piles. I have always employed it in connection with an equal part of the bitartrate of potassa, the precipitated sulphur being preferred. Of this one to two heaping teaspoonfuls are given at night, stirred into a teaspoonful or so of water; the addition of a syrup impairs its value. The benefit from this in eczema of the anus I can attest by a not inconsiderable number of cases. I have no suggestion as to the *rationale* of its action, except that it acts as a liver stimulant, nor have I much experience with it in any other disease of the skin than eczema. I have given it repeatedly when this eruption was situated elsewhere than on the anus, but as many other remedies were used, I cannot be certain as to its effects.

The lowest combination of sulphur with oxygen, sulphurous acid, SO_2, is seldom used internally, but will be spoken of later in regard to its external uses.

Sulphide of calcium, CaS, has recently attained a considerable reputation in the treatment of skin lesions attended with suppuration, and to its value I wish to bear strong witness, as I have notes of over one hundred cases in which I have used it. The first suggestion of its use was in acne, and a number of observers have testified to its

value in certain cases. I have administered it to sixty-nine patients with acne, sometimes alone, more often perhaps combined with local measures, but even then I have been able to test its efficacy, because it was used intermittently, and the changes could be thus readily observed. It certainly will not cure every case of acne, and on many it seems to have little, if any, effect. It is chiefly serviceable in those cases which have considerable of a pustular element, either as the acute small suppurating pimples of youth, or the larger masses of acne indurata; it is of but little service in rosaceous acne.

The somewhat similar affection, hordeolum, finds in the sulphide of calcium its best remedy, and in a number of cases I have seen the styes wither at once under it and cease to be produced; of its great value in this lesion I can bear personal testimony, having taken it myself on a number of occasions and with almost uniform success. In abscess of the external ear it has been highly praised.

Sulphide of calcium is also of decided value in furunculosis, not only in aborting the boils present or forming, but in checking the suppuration from those which have already discharged; this remedy also I believe improves the habit or state of the system, so that in place of a succession of boils, as expected, a single one or two has completed the attack.

The effect is also striking in anthrax, and I have more than once seen a large mass of inflamed tissue, which would surely have suppurated, subside under its influence; and I have also seen a carbuncle which already exhibited points of pus end in a marvellously short time by this means. I have given it in twenty cases of boils and carbuncles, generally, if not always, alone. It is also of great service in the boil-like masses, often of some size, which appear on the heads of even very small children during the summer. I could give a number of cases where this process was thus checked almost at once.

True, non-parasitic sycosis has in several instances been greatly benefited by sulphide of calcium internally in my hands, though it is capable of carrying the case to a certain distance and no farther.

I have also used this remedy in a number of cases of suppurating bubo during the past year and with striking results; my friend, Dr. Otis, has also recently reported good results in similar cases.

There is not a little difference in the different specimens of the sulphide of calcium, and not infrequently the drug will appear inert. When made into fresh pills they should have a decided odor of sulphuretted hydrogen, and should leave a taste of the same in the mouth; they may also be followed by slight eructations of the same, and the stools should have the same odor.

The dose which I have most usually employed is one-quarter grain, four times daily, on an empty stomach. I have generally used the pills freshly made with a small amount of the extract of gentian, but the gelatin-coated granules are quite reliable. To children I have commonly given it in suspension in water with a little glycerine, and have found it equally effective; the dose has been smaller, often a tenth of a grain, to infants, four or five times daily. I have also given, with good effect, the smaller doses, as one-tenth of a grain every two or three hours.

Sulphuret of potassa is also given internally, and probably will be

found effective in the same conditions as those in which the sulphide of calcium is of service; but of this I have no personal experience.

That it is the sulphur which exercises the beneficial effect in these cases there can be very little, if any, doubt, inasmuch as other preparations of sulphur have been used with great advantage in the treatment of boils. These are the sulphite and hyposulphite of soda and sulphuric acid. The former of these preparations I used quite extensively some years ago, and reported very favorably upon it as the best remedy with which I was then acquainted. Sulphuric acid is also well recognized as of service in this condition, and need not be dwelt upon here.

It is also hardly necessary to enter upon the consideration of the many agents used in medicine in which sulphur enters as a secondary constituent in the form of sulphuric acid, but as they are among the most important remedies they should be mentioned: such as the sulphates of atropia, copper, iron, magnesia, mercury, morphia, quinia, soda, strychnia, and zinc. It must be remembered that sulphur is a large constituent of the human frame, and not an unimportant one, and that the reason why the sulphates are among the best forms in which to employ the various other agents may be and probably is because they are already combined with one of the elements of the body. As an example of a wonderfully valuable combination of the compounds of sulphur in diseases of the skin may be mentioned that known to many as Startin's mixture, with the following formula: ℞.—Magnesiæ sulphat., ʒi; ferri sulphat., ʒi; acidi sulphurici dil., ʒij; tinct. gent., ʒi; aquæ, ʒiij.—M. Teaspoonful after eating. This is most potent in reducing the cutaneous congestion in such conditions as erythema multiforme, erythematous eczema, and urticaria, and is constantly employed in my private and public practice. The effective agent is certainly not the magnesia alone, for if given singly or in other forms the results are not the same; nor is it the iron or the gentian, but it is the *combination*, and I cannot doubt but that the sulphur element plays a very important part.

The confirmation of the internal value of sulphur is further found in the mineral waters which are impregnated with sulphuretted hydrogen, known as sulphur waters, such as those of Richfield, Sharon, Avon, the White Sulphur of Virginia, and many others in this country and abroad. All are familiar with the popular views both among the laity and the profession in regard to the efficacy of these waters in diseases of the skin. There is very generally some basis for popular opinion, and in this instance it is not very difficult to find. The error in it is in the want of discrimination of proper cases, which must ever obtain in such medical matters. These sulphur waters undoubtedly first obtained much of their reputation from their use externally in parasitic diseases, animal and vegetable, as will be mentioned later.

But these sulphur waters have also some power upon the system used internally, and beyond question are of a certain value used thus in some skin diseases: the waters act upon the liver and intestines, and are undoubtedly of service in the rheumatic and gouty habit. I have seen a certain amount of good from them in chronic

eczema and acne, and have personally experienced the benefit of the White Sulphur taken internally alone in urticaria. But multitudes of patients with eczema, acne, and other skin affections go to these springs without benefit, and the many instances of psoriasis which I have seen who had previously been to these springs without permanent benefit leads me to doubt their power over this disease.

I greatly regret that I cannot speak more definitely in regard to the internal use of these sulphurous mineral waters in diseases of the skin, for while I believe that as quickeners of the emunctories they are of some value, I have seen so many individuals who have failed of cure at them, that I cannot but think that the mode of their use has been faulty. Unfortunately, we have very little reliable information in regard to the actual powers of our mineral springs, for little trust can be placed upon the matter printed in the circulars and pamphlets furnished by the hotels, and we have almost no independent and well-weighed testimony, based on large experience. Even physicians resident at springs, both in this country and abroad, become prejudiced to such a degree as to hardly see any value in other springs save their own, and to attribute everything to the spring in which they have had experience. There is great need for the collection of reliable data on a scale sufficiently large to give deductions therefrom which shall be of value. The writer has many on record, and seeks daily to gather such from practice, but the reports are yet too conflicting to allow of any conclusions to be formulated. He will be greatly pleased to receive any assistance possible in this direction, and will be glad to learn of positive, proven facts of value in regard to these matters, as he intends to report on the matter when sufficient data are collected.

The external use of sulphur and its compounds is of more definite interest than the internal, because the facts are more conclusively demonstrable.

First and chiefest of all must be placed the treatment of scabies, which, as previously remarked, has probably been the means of giving sulphur much of its reputation as curative of diseases of the skin. The itch is undoubtedly one of the diseases which is becoming extinct with advancing civilization, although in time past it formed a not inconsiderable share of cases with skin disease. It is to-day very much more frequent in some countries than in others. Thus, at the clinic of Prof. Hebra, in Vienna, one sees cases almost if not quite daily, and in Paris it is so common that those affected with it are not admitted to the great Hôpital St. Louis, but merely receive a card, which passes them through the rapid cure which will be described later on. In Glasgow scabies formed one-quarter of ten thousand skin patients in public practice. In this country, on the other hand, it is very uncommon, forming only between two or three per cent. of all the cases of general skin disease which I have seen in public practice.

During our late war, however, the disease was much more prevalent, and good observers consider that the "Army itch" was only this disease. It is also sometimes common in public institutions.

It is, therefore, principally as a local agent that sulphur has its chief reputation, and it is thus that it is often employed in general

skin disease, with the hope or impression that in some way sulphur is "good for the skin," without any definite idea of what is to be accomplished.

Now, sulphur is an irritant to the skin, whether it is applied to abraded surfaces or rubbed well into the healthy skin, and this must ever be borne in mind when it is used. It is of value, therefore, only when a stimulant is required, or when its parasitic action is desired, and is consequently of service in comparatively few diseases of the skin. Foremost among these still stands scabies, for which it may almost be called a specific, for it certainly can, singly and alone, cure this eruption by destroying the cause, the itch insect.

The treatment of scabies has been now reduced to a very simple matter in most cases, and depends upon the very thorough application of the parasiticide to every place occupied by the burrowing acarus. The plan generally adopted is that of Hardy, of Paris, which consists in soaping the body well for half an hour, following this with a warm bath for an hour, and giving then half an hour of thorough inunction. The sulphur ointment of the Pharmacopœia, which is composed of one part of sulphur to two of simple ointment, is far too strong for most skins, and is very apt to excite an artificial inflammation, which may readily be mistaken for a further eruption of scabies. It is well, therefore, not to have it used too long or too energetically on delicate skins; one thorough course, such as that above described, suffices for the cure of many cases, but it is well always to wait a few days to observe whether the itching returns, when the course may be repeated. I seldom, however, use the officinal ointment, but prefer to have one made of a strength suited to the individual case, generally about two drachms to the ounce, adding a drachm or two of storax, which is a parasiticide of very considerable value.

Precipitated sulphur is of no little value in acne, and many of the best applications used for this eruption depend largely for their efficacy upon sulphur. Such, for instance, as the following: ℞.—Sulph. precipitat., ʒi; etheris sulphurici, ʒiv; spts. vini rectif., ʒiijss. Also, ℞.—Sulph. precip., ʒi; tinct. camphoræ, ʒij; glycerini, ʒij; aquæ rosæ, ʒiijss.—M.

The compounds of sulphur will also be found very efficient in acne, as, for instance, the hypochloride of sulphur, so much extolled by English physicians, used in the strength of one or two drachms to the ounce of ointment, well rubbed into the face at night. Iodide of sulphur, used in the same way, in perhaps a little less strength, is also effective.

But all these applications are stimulating, and care must be taken not to carry this plan of treatment too far, for while we can, by well-regulated stimulation, urge the skin to healthy action, it is very easy to overstep the bounds, and we can have the harsh, irritated skin, which may be even more annoying to the patient than the eruption which we seek to remove.

Another compound of sulphur is also of very great service in acne, and this is found in a formula which I have mentioned already several times in print. This preparation is only mildly stimulating, and is one which can often be used with advantage even in

inflamed faces. It is composed thus: ℞.—Potass. sulphuret., zinci sulphat., āā ʒi; aquæ rosæ, ℥iv.—M. The ingredients are each dissolved in one-half the water, forming clear solutions; they are then mixed, and a white precipitate takes place, which is to be shaken up, and allowed to dry on the face. In speaking of the value of local applications in such eruptions as acne, etc., it will be understood, of course, that internal, dietetic and hygienic measures are to be used as well; these are, of course, foreign to the immediate purpose of this paper, which is only to show the importance of sulphur as an agent in dermatological practice, if rightly used.

Sulphur and its compounds have a not inconsiderable value in the treatment of the vegetable as well as animal parasitic eruptions. Sulphur will destroy the life of the parasite in favus, ringworm, and tinea versicolor, and may be employed with success in several ways. My preference is usually for sulphurous acid, as I have urged on several previous occasions. The mistake in the ordinary methods of using sulphurous acid is, I think, twofold: first, it is generally recommended to be used diluted with one or several parts of water. This I consider to be entirely unnecessary and worse than useless, as it diminishes the efficacy of the remedy. Pure, *fresh* sulphurous acid I have not found too irritating, even to the skins of females and children, to whom I constantly advise it. The reason for the common advice to dilute it rests, I think, upon the second error which generally occurs, namely, that the acid is not perfectly fresh, but has undergone a decomposition, as it has a very great affinity for oxygen, whereby it is changed from sulphurous acid (SO_2) to *sulphuric* acid (SO_3), which latter is of course irritating to diseased and delicate skins. To avoid this as far as possible I always order a fresh, unopened package of sulphurous acid, as it comes from the manufacturers, in half-pint and pint bottles, and have the patient fill a small bottle, say one containing an ounce, from this, and use from the smaller bottle, keeping the larger one tightly corked; when this direction is followed only good results are seen.

Sulphite and hyposulphite of soda, in solution, two to four drachms to the ounce, will also serve tolerably efficiently to remove these vegetable parasitic eruptions, but are of less value than the pure sulphurous acid, upon which their virtues depend.

We may also use the sulphurous acid very efficiently in the way of the well-known sulphur vapor-bath, which is made by burning sulphur in a closed box in which steam is also confined. This will remove the tinea versicolor, or liver-spots of older writers, on the chest and back quicker than almost any other measure, a very few baths serving to quite free the skin from it. But this eruption has a very great tendency to relapse, because the destruction of the parasite may not have gone far enough to reach every spore, and a single mass of the vegetable growth remaining in or around a hair follicle may be the means of propagating the disease anew. It is well, therefore, to continue treatment for some time after the apparent removal of the eruption.

A word may here be added in regard to the use of sulphur vapor-baths in other diseases of the skin, for it is very common for patients to use them, and for physicians to recommend them indiscriminately

in all cutaneous diseases. It may at once be stated that they should not be so used, and I see far more persons who have tried them either ineffectively or to their harm than I see those who are benefited by them,—yes, two to one. It may be almost too trite a remark to make here, that the value of remedies in skin diseases depends wholly on accuracy of diagnosis and applicability of the remedy, but it is a point which is hardly enough borne in mind by the profession at large, and no better exemplification of this can be found than in the reckless way in which sulphur baths are advised when the skin is diseased, unless it be the wholesale administration of arsenic under the same conditions. Sulphur vapor-baths are of service in comparatively few diseases of the skin. In the vegetable parasitic diseases as mentioned, they are useful, except, of course, for eruptions on the face and scalp, where they cannot be applied. They are also of value in scabies, though inferior to other means. Psoriasis is benefited by them, but cannot be cured by this means, and not infrequently they will hardly affect the eruption at all.

Sulphur vapor-baths are, as a rule, inapplicable in eczema, except perhaps in some very chronic cases, where the disease is localized to a few patches, and the skin is hard and strong. In the vast majority of cases of eczema the sulphur vapor-bath irritates the skin and aggravates the eruption, or causes new disease. It is wholly inapplicable in such eruptions as urticaria, herpes, pemphigus, and the like, together with the large classes of hypertrophies, atrophies, and new formations of the skin.

In regard to the use of the sulphur vapor-bath in syphilis there is some difference of opinion, but there can be no doubt that it cannot cure the disease, though, by increasing the emunctory action of the skin, it may make the mercurial course to be better borne, and more effective in certain cases which have long resisted treatment.

Time and space forbid entering more largely into the subject, but sufficient has been said to call attention to the wide field of usefulness which sulphur plays in the treatment of diseases of the skin, and yet to show that it is not a panacea for this class of affections. These remedies are to be employed intelligently, like any others, and when so used may generally be relied on in the appropriate diseases.

Sulphur is of value internally, as it acts upon the liver and intestinal canal in cases of eczema of the anus, and in many cases of other skin disease which are accompanied with piles. In its compounds it is of value in diseases in which the production of pus is a feature, as in the use of sulphide of calcium, sulphuric acid, and hyposulphite of soda in boils, acne, carbuncles, etc.

Locally, the main use of sulphur is in the treatment of the parasitic diseases, animal and vegetable, and is also of service in acne. It is a local *stimulant*, and, if incautiously used, gives rise to *irritant* action, and is entirely inappropriate in acute inflammatory skin affections, and useless in hypertrophies, atrophies, and new formations. Sulphur vapor-baths and mineral water containing sulphur should not be used indiscriminately in skin affections, but are of value in parasitic diseases, and also in those in which a rheumatic element is strongly pronounced.

ON

THE USE OF WATER

IN THE TREATMENT

OF

DISEASES OF THE SKIN.

BY

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DISEASES OF THE SKIN.

Water is by no means an indifferent agent as regards its influence upon the skin, either in health or disease; its right use is capable of much good, its abuse is equally capable of much evil. As it is an agent which is ever at hand, and one which instinct suggests the employment of, it is pretty certain to be used in most diseases of the skin by the laity as well as by the physician, and it is well therefore for the latter to have definite views in regard to its value when properly employed and its harm when wrongly applied.

The employment of water to the cutaneous surface may be considered in reference to its use in health as preventive of disease, and its use when the skin is the subject of disease; in the latter case it may be studied both in regard to its general use to the healthy parts and its employment upon parts affected.

In regard to the application of water in health there is little question in my mind that abundant bathing serves as a great preventive, both of cutaneous diseases and of systemic disorders, although Hebra not long ago gave quite the contrary impression in his article upon the use of baths. The skin whose dried excretions are frequently removed and whose circulation is quickened by reasonable bathing, undoubtedly is in a more healthy state and is better capable of performing its functions than one whose sluggish action is favored by neglect, and whose epidermal covering is allowed to adhere until rubbed off in a dry state by the clothing, even though Hebra does argue that skin diseases are no more common among those who may be truly said never to bathe the whole body, as is seen among some eastern peoples, than among bathers.

In health then, I regard the daily use of the cold or tepid sponge-bath, followed by active friction, as one of the greatest safeguards against disease, both of the integument itself and of the system at large. In regard to warm baths, they have their function, and as a nervous sedative they may be of real service to certain persons, and when the daily tepid or cold ablution of the entire surface is not performed, they should be employed at stated intervals for the removal of effete matter from the skin; once a week, as is so commonly practiced, usually suffices. After a warm bath, a cold douche, as with a shower, or with a sponge in a pail of cold water, greatly enhances the power of the bath as a quickener of cutaneous circulation, and diminishes the danger of catching cold.

The subject of the use of the Turkish and Russian baths and their modifications in health, is too large an one to enter upon at the present time, and in a measure foreign to the subject of the paper. Suffice to say, they are continually abused in health, not only as relates to any sudden accidents which may and occasionally do result to those in peculiar conditions, but also as to their repeated use, which, like any powerful stimulant, may be and constantly is followed by a reaction whose ultimate effect may be very bad. They are not the panacea for all bodily ills, they are not the balm of life, securing immunity from disease, indeed, no small share of cases of diseases of the skin in private practice occur in those who have previously employed these steam or hot air baths to a greater or less degree. Their proper use in certain diseased conditions of the skin will be referred to later.

The use of water to the skin in its diseased state, may be considered under several heads, as follows:

1. Common water baths, including river and sea bathing.
2. Ablutions, bathings or soakings, with hot and cold water.
3. Cold and hot packing: water cure.
4. Vapor and hot air baths.
5. Medicated water baths.
6. Natural mineral springs.

1. The ordinary warm bath, as before mentioned, has for its function the removing of effete matter and softening the skin, and equalizing the circulation. It may thus have a favorable action in disease and may be used with advantage in chronic

scaly eczema, psoriasis, ichthyosis, also in lupus and in obstinate ulcerative syphilis. This warm bath has been long used by Hebra continuously in certain cases, that is the patient remaining in the water for weeks or even months, the temperature being maintained by steam or a current of hot water, the water being also changed more or less continuously. In these the patient eats and sleeps in the bath upon a proper mattrass, only leaving the bath to empty the bowels. These have been found to be of principal service in burns, pemphigus foliaceus, phagedæna, etc., as I have myself witnessed, and are of really great value. In some instances patients have remained in them for many months consecutively.

But ordinary warm water baths cannot always be advised with impunity in all diseases of the skin; acute eczema, or even more sub-acute, exuding forms of this disease will be found to be aggravated by the contact of simple water. Urticaria will also be rather irritated, as will indeed most of the inflammatory affections of the skin. It is well to remember when baths are given to a patient with a pruritic skin, to give a caution against too great friction afterwards, as this not infrequently more than balances any soothing effect of the bath, and the irritation afterwards may be very great.

In regard to river and lake bathing, the reaction and the exposure to the air will aggravate most skin diseases. Sea bathing is of service in psoriasis, and warm baths of sea water have been followed, in my experience, with very beneficial results in this disease; it is a remedy which I resort to a good deal during the summer months. But sea bathing is decidedly harmful in most cases of eczema, as I have repeatedly witnessed, although I have heard of a few instances where the disease was very chronic and the eruption very indolent, in which sea bathing was said to have cured the cases. But I am very cautious about allowing eczema patients either to bathe in the sea or to spend much time at the sea shore. The same is true of acne, and every autumn I see many, many cases where the sea influence has greatly aggravated the eruption, and many where the eruption has appeared for the first time while by the sea side; sea voyages generally act unfavorably in acne. Sea bathing sometimes is of much service

in chronic urticaria, but in most of the acute inflammatory affections of the skin its use is to be prohibited.

2. In regard to ablutions or washings and bathings or soakings with hot and cold water, much may be said. The general tendency is to bathe or wash a diseased part for the sake of cleanliness, and this will pretty certainly be done, whether the physician directs it or not, and often in a manner greatly injurious to the lesion. It is a most common practice to wash eczema, and especially do we often see the eczema of children washed diligently, often several times daily, the mothers saying that they find it "impossible to keep it clean." Now, in my opinion, an eczematous surface should be washed very seldom and that only by special direction from the physician. Nature seeks to make a protective covering with the exudate; this is continually removed by washing, the process is repeated and cure is most certainly retarded. If more time be now given for the formation of a more resisting epidermal covering, occasional washings, serving to remove superfluous exudation and thus to allow the astringent used to come into contact with the diseased surface, repair will take place more speedily. I have repeatedly witnessed eczema in children get well under the same treatment previously employed by the physician calling the consultation, when only the frequent washings were omitted.

The same is true of eczema in the adult; as an instance of the effect of water in causing and prolonging an eczema, we may mention the case of the eruption when it occurs on the hands of wash-women, or those whose occupation compels frequent wetting of the hands. It is next to impossible to cure some of these cases, as in bar-tenders, waiters in hotels, as well as wash-women without a cessation of the occupation, and just so impossible is it to cure certain cases of eczema while frequent washing is practiced voluntarily.

But washing is indicated at times, and some judgment is necessary to determine just when this should be practiced. In eczema of the scalp it is rarely best to wash the head more than once or twice a week, and here, even more than elsewhere, it is specially necessary to reapply the ointment or other dressing *immediately* after the cleansing, before the denuded surface has had time to

become again covered with the impenetrable coating which quickly forms.

Proper use of water is also of much service in certain patches of chronic eczema, when there is much thickening of the skin, with oft-times desperate itching. Such patches may be washed daily with advantage, and sometimes they will bear very great stimulation. Thus, taking the sapo-viridis and a bit of flannel and water, very sharp friction may be made for several minutes, after which the part is to be washed off clean with warm water and immediately covered with the appropriate dressing; the stimulation may even be carried so far as to use a brush, and I well remember a plasterer at Demilt Dispensary, who scrubbed the backs of the hands with a common floor scrubbing-brush and soft-soap and water until they bled. The result of this active treatment was to remove a greatly thickened eczema of many years standing, so effectually that, although he has continued his occupation and I have seen him repeatedly during the past four years with eczema on the sides of the hands and fingers, the backs of his hands, which were the seat of his severe attack and energetic treatment, have remained perfectly smooth and healthy.

Hot water is sometimes of the very greatest value in eczema. In eczema of the anus often nothing gives so much relief as holding a cloth dipped in water, as hot as can be borne, against the parts and repeating the application two or three times; the part being then covered with the dressing appropriate to the case; the same is of service in eczema of the vulva. In eczema of the scrotum I frequently direct that the part shall be suspended for a few moments in a cup of very hot water before other application is made. Simple pruritus of these parts is also often greatly relieved by these hot applications.

Chronic eczema of the palms of the hands, where the surface is hard, dry, fissured, often shiny, and the hands well nigh useless, will sometimes seem almost to melt away under the daily soaking of the palms on the surface of a basin of scalding hot water, followed by diachylon or other ointment. Eczema of the ends of the fingers and of the nails sometimes yields to this after all other measures have failed.

Onychia, both where there is and where there is not an appa-

rent eczematous element, is also very greatly benefited by these soakings in very hot water, accompanied and followed by other appropriate measures.

Indolent ulcers of the legs take on active changes and often cicatrize rapidly under the powerful stimulation of the alternate application of a cloth dipped in very hot water, followed instantly by one taken out of a vessel of very cold water.

Very striking results are often obtained from the use of hot water in some of the forms of acne. It is applied by means of a cloth, as a handkerchief, dipped in the hot water and held to the face until the heat of the cloth has passed off, when the performance is repeated two or three times for a period of not over three minutes to five altogether; a long soaking of the face in water which is not hot enough will aggravate the eruption, but the reaction following the brief application of very hot water, is often very remarkable. After multiple scarification of the pustules and papules of acne, prolonged bathing with tepid water is of service in encouraging the bleeding, which otherwise always tends to cease sooner than is desired.

In certain cases of chronic erythema, where the congestion resists other measures, the alternate application of cloths dipped in very hot and very cold water, serves to break up the capillary stasis. On the other hand, repeated washing of ulcerative surfaces will often be quite sufficient to prevent their healing; this is often seen in ulcerative syphilides, which will sometimes resist the proper internal medication as long as repeated washings are persisted in, and yields to it almost immediately when cotton batting is applied and left undisturbed. Varicose ulcers of the leg are not infrequently kept from healing by the too diligent cleansing which patients are ever ready to bestow.

3. Cold and hot packing in wet sheets, as practiced in the water cures, is of a certain value as a remedy in diseases of the skin. The results which sometimes occur, as boils on the surface, are to be deprecated, and are not, as is popularly supposed, either a good sign, or a good element in the treatment; we of course no longer believe that there is a "materies peccans" which needs to be eliminated. But the wet pack has served well in the hands of Hebra in the treatment of acute psoriasis, also in

acute general eczema. The packing is made twice daily, for for several hours, morning and evening.

This is most conveniently accomplished by placing two blankets lengthwise upon a bed, and over them a sheet dipped in cold water. The patient then lies naked upon this, which is closely folded over him up to the chin, and the blankets are then wrapped closely around, and the whole done up with bands, so that the patient is immovably fixed, helpless indeed. The first sensation is that of a pleasant glow, and before long perspiration ensues, which should be encouraged by draughts of water frequently given; the packing lasts from two to five hours. It should never be forgotten to place an urinal between the thighs of the patient before envelopment.

Under this treatment the scales of psoriasis disappear, and the red patches daily become less visible. Few patients in this country will submit to this treatment, but when it is desired to remove the existing eruption in the shortest possible time, it is of value. Packing is not of service in many affections of the skin, and should seldom be prescribed; although in the water-cure establishments all eruptions are submitted to this course. The profession need more accurate scientific information in regard to the precise effects and the therapeutic indications of this powerful remedy.

4. Vapor and hot air baths, and their modifications, may play a not inconsiderable part in the treatment of certain cutaneous diseases, although from their expense and the difficulty of their application at home, and from the fact that most of the establishments where they are administered are in the hands of ignorant, unprofessional persons, they are not employed to the extent which their real value would indicate.

While there are undoubtedly differences in the mode of action and in the results obtained from the Russian or vapor and the Turkish or hot air baths, I am not aware that any distinctive therapeutical indications between them, or effects from one more than the other have been scientifically noted in diseases of the skin. The Turkish or hot air bath, with the subsequent cold douche, is that generally preferred and undoubtedly is the safer. It is of a certain value in psoriasis, and of some service in chronic

eczema, also in chronic urticaria, lichen and ichthyosis, but the results obtained are generally rather disappointing, and I must acknowledge that I use them comparatively seldom.

Certain modifications of the steam or vapor bath are, however, oftimes of considerable aid in treating diseases of the skin. Under this head come the sulphur vapor and mercurial vapor baths, which, as is well known, have great repute in this line of practice. They consist in a steam bath to all the body, save the head, combined with sulphur or mercury volatilized by heat. The value of the mercurial bath, in many cases of syphilis, need not be dwelt upon; its use should be strictly confined to cases where this diagnosis is certain. The indiscriminate use of a mercurial or sulphur vapor bath when the skin is affected is highly reprehensible.

The real utility of sulphur vapor baths in diseases of the skin is in a measure still *sub judice*. Their anti-parasitic value is fairly positive. If well used they will cure scabies, phtheiriasis and the vegetable parasitic diseases. But even in these the irritation occasioned by them is sometimes so great that the artificial eruption produced quite masks that of the disease proper and prevents their continuance. Sulphur vapor baths are also of some value in psoriasis, and occasionally the eruption will seem to yield to them, but quite as often they are powerless, as I have frequently witnessed. Chronic, more or less generalized papular eczema, may be much benefited by sulphur vapor baths, given every other day or so; but here care must be exercised, for this very condition may be entirely caused by their use.

Mr. J. L. Milton, of London, has arranged a convenient apparatus by means of which vapor baths, with or without the addition of sulphur or mercury vapor, may be administered at the patient's house with comparatively little expense. It consists of a series of hoops over which a thin rubber or gutta percha covering is stretched, which, when the patient is seated on a chair is gathered around the neck and reaches to the ground; a second cloak of coarse flannel is placed within the rubber and over the hoops. The patient sitting naked on the chair, with the Mackintosh closely drawn around the neck, a lamp with a steam generator is placed on the floor beneath the chair; after the body has been submitted

to the steam for some minutes, if it is so desired, the sulphur or mercury is introduced on a receptacle over the lamp, placed in the centre of the pan of boiling water, and continued for a few minutes longer. By means of this apparatus steam baths may be given with advantage in a number of cutaneous affections; acne, chronic eczema, lichen, psoriasis, etc., and when it is desired, a cold dash afterward makes of it a very decent substitute for the ordinary Turkish or Russian bath, according as steam is used or simply hot air; this can, moreover, be employed in localities where these are not accessible, or in cases where it is not desirable to have the patient leave the house. I have also had used a wooden box, constructed at home, somewhat like those employed at the establishments, in which the patient sits with the heat, which may be given by an ordinary low gas stove, beneath the chair. This can be made by any carpenter and is very inexpensive.

Mention must be made here of the vapor bath or douche applied locally in acne, as recommended so largely by French writers. It consists in holding the face over a basin of standing water, with the head and basin enveloped in a blanket or other covering. This plan answers very well in many cases, and greatly relieves the congestion, but the indications for it are better fulfilled, I think, in the method of soaking the face with hot water as previously described.

5. Medicated water baths. This is a very important division of our subject, and should always be considered in dealing with diseases of the skin. Not only is this an important matter in reference to the direct action of the bath upon the *diseased* skin, but the general medicated bath is to be considered in regard to its effect upon the general health, which may be very considerably modified thereby. Experimental investigations have shown very conclusively that under the frequent use of water to the whole surface, assimilation and disintegration proceed more rapidly than without it. In certain skin diseases, therefore, where these processes are slowly or imperfectly performed, the warm bath, especially when holding alkalies in solution, does much to improve the general health and to remove diseases of the skin, even from locations which are not submitted to the bath. Thus I have found many cases of acne to make much greater and more rapid improve-

ment when alkaline baths were added to the measures previously employed; the same is true of some cases of eczema of the face or scalp.

Many ways of medicating the water to be employed in the bath have been suggested which need not be mentioned here, inasmuch as practically but few are employed in daily practice, and the indications for the use of the various kinds of baths have never been laid down with any clearness or precision; and I regret that time forbids my entering more deeply into the subject at this time.

My most common medication for baths consists of carbonate of potassa, carbonate of soda, and powdered borax, four, two and one, ounces of each, respectively, together with from one-quarter to one-half pound of starch to a bath of thirty gallons. This is a mild alkaline bath, is decidedly soothing to most skins, and acts very favorably on sub-acute eczema and urticaria; it may be used much stronger, as in psoriasis, ichthyosis, prurigo, etc. The bath is to be given at bed time, at a temperature of from 87° to 95° Fahrenheit, the patient remaining in the water fifteen or twenty minutes. On coming out, if the skin is pruritic it is not to be rubbed, but dried with a heated sheet, and all diseased surfaces are to be covered at once with a suitable ointment. I find it very grateful to the patient to have the entire surface lightly annointed with the glycerite of starch, or cosmoline, to which a small quantity of carbolic acid, five to ten grains to the ounce, may be added, if there is much general itching.

Such medication of the bath may be modified to suit certain circumstances; thus, the starch may sometimes be replaced by gelatin, a half a pound to the bath, well boiled; or glycerine, four to ten ounces to the bath, will make it more soothing to some skins. Sometimes the soda and potash prove too drying,and the quantity of borax may be increased and these diminished.

It is difficult to give in a few words the exact indications for the use of these alkaline and starch baths, but in general I may repeat that they are soothing to a pruritic skin and serve admirably to promote the processes of life. Sub-acute and chronic eczema are almost always greatly benefited by such a bath, taken at bed time, twice or three times a week, or even every night, if not too debilitating.

Sulphuret of potassium has been frequently used in baths, especially to relieve itching, but I do not employ it except as used in the artificial Barèges baths, which may be obtained at some of the bathing establishments; baths made with sulphuret of potassium should be given in a wooden tub, as the salt rapidly attacks metal lined tubs, if in a strong solution. I have seen a number of instances of cutaneous eruptions where sulphuret of potassium baths had been used to the great aggravation of the disease, and cannot give any indications for the employment of this kind of bath, although the books mention it as valuable.

Occasionally benefit will be derived from the use of other substances in solution in baths. Thus, Hebra makes very considerable use of a bi-chloride of mercury bath, in syphilis, lupus and prurigo; nitric acid, or nitro-muriatic acid baths have been used with advantage in jaundice, and also in other diseases, especially to relieve itching, and to promote cutaneous action. Sometimes vegetable substances may be added to a bath, in certain diseases of the skin, as conium, opium, etc., for a sedative effect and the relief of pain; or astringents, as oak bark or tannin, for their particular effects.

The common warm, or an alkaline bath is sometimes given with much effect after the application of tar; thus, in chronic and much thickened eczema, the part is tarred over, and the patient enters a bath, remaining there 15 or 20 minutes; this is a favorite plan with Hebra.

6. Finally, the natural mineral springs should never be forgotten in the treatment of the obstinate cutaneous affections, although their efficacy is, in my opinion, greatly over-rated. The subject is too large an one to enter upon on the present occasion and will be deferred to another opportunity. Suffice it to say here, that while mineral springs are of much real service in many diseases of the skin, their use is not to he rashly advised without a definite knowledge of what is to be accomplished; they are to be prescribed, as any other remedy, to fulfill definite indications; certain springs, while beneficial to certain eruptions, are just as surely harmless or inefficatious in others. The habit, therefore, of sending a patient to particular mineral springs simply because affected with a disease of the cutaneous surface, is as irrational

indication, hoping subsequently to treat of their derivatives, as creosote, acetic acid, turpentine, pitch and resin, also of coal-tar and its derivatives, carbolic acid and petroleum. The varieties of which we shall speak are, the common wood-tar, the oil of tar, the oleum cadini, the oleum rusci and the oleum fagi.

Ordinary wood-tar, the *pix liquida* of our pharmacopœia, is an impure turpentine obtained by destructive distillation, or slow combustion without the admission of air, of several species of the *pinus* and *abies*, the pine and fir trees of different countries; turpentine being the concreted juice exuding from incisions into these trees, from which again our *oleum terebinthinæ*, or spirits of turpentine, is prepared by distillation. Wood-tar, as obtained from the apothecary, is a very dark brown, semi-liquid substance, with a peculiar empyreumatic odor, and a bitterish, resinous, somewhat acid taste. It consists of resinous matter united with acetic acid, oil of turpentine and various volatile empyreumatic products, and is colored with charcoal, which component parts may be resolved by distillation into crude acetic acid, pitch and oil of tar.

Oil of tar, *oleum picis*, is a dark-brown liquid, quite oily in its look and feel, and having strongly the odor of tar. It is found to contain six principles, only two of which are of much importance, namely, *picamar*, to which it owes its bitterness, and *creosote*, on which its medical properties probably depend.

Oleum cadini, oil of cade, the best known in this country of the remaining three varieties, is obtained from the wood of the *juniperus oxycedrus*, and manufactured in the south of France. It is more syrupy than the last named oil of tar, but not so thick as the next named, *oleum rusci*, or as common tar itself. It is perhaps the most used variety in this country and France, partly, I imagine, from fashion, based on the idea that the odor is less disagreeable than the other varieties, which to me, however, is not the case.

Oleum rusci, or oil of birch, is the product of a similar destructive distillation of the bark of *betula alba*, or white birch, and is a product of Russia and Poland. Its consistence is much greater than the other two and its color darker, its smell, moreover, is far less unpleasant, and indeed, to many it is very agreeable, it being this oil which imparts to the Russian leather its peculiar perfume, now so highly esteemed. It is used extensively by Hebra, and valued most by him of all the empyreumatic oils. Anderson, also, recommends it very highly. It is more expensive than other preparations, which, however, is of importance only where it is used on a large scale, as in hospitals. It is rarely seen here; I have inquired for it in vain at a number of drug-stores; some keep it, however.

Oleum fagi is but very little known in this country, mention being made of it only by Hebra and Neumann, although it is the variety most commonly used in Germany. I have not been able to find a specimen yet, although I have instituted quite a considerable search among the city druggists. It is a German product, coming from the white and red beech, *fagus sylvatica*, the nuts furnishing most of the tarry oil.

PREPARATIONS OF THE TARS, AND MODE OF APPLICATION.

Tars are soluble in alcohol, ether, and the volatile and fixed oils, and may be made into ointments with various excipients, and further may be mixed with glycerine under certain conditions, and, finally, some of the oils of tar will dissolve iodine.

1. *Preparations and Uses of common Wood-Tar.*

The pharmaceutical preparation of tar of oldest date is the *unguentum picis liquidæ*, made by melting together equal parts of tar and suet, straining and stirring constantly while cooling. I have already metioned that Willan recommended tar ointment, as also Bateman, who says, in speaking of lepra: "In a few cases, the continued application of tar ointment has effectually cleared the skin of the patches, and restored its texture, even when internal remedies had little influence; but this advantage is not always permanent." I have used the unguentum picis liquidæ with good effect in scaly eczema, also in two cases of non-specific palmar psoriasis, combined with sulphur ointment in each instance. When nicely prepared and fresh, it is not an unpleasant application—very decidedly stimulant, and is especially applicable to ill-conditioned ulcers of the lower extremities.

Tar is sometimes employed pure, applied directly to the skin, alone or diluted one-half with olive or cod-liver oil. This is especially true of the three oils of tar last mentioned, particularly by Hebra, but I have seen most excellent effects follow the faithful use of common ship-chandler's tar in a very trying case of almost general psoriasis. A gentleman, aged thirty, first had psoriasis eleven years ago, which had been treated by different physicians with varying success, generally very unsatisfactory, until he began, two or three years since, the external use of common tar, first diluted one-half, when it began to disappear, and the body has remained almost entirely free during the past two or three years; when a new spot appears a brief course of tar removes it. I would say, however, that he has taken arsenic in combination with iron and bark most of the time, but the patches always resist until tar is applied. He has been very diligent in its employment, remaining often for several days or a week, and on one oc-

casion a whole month, with the continual contact of tar and the diseased surfaces. Hebra frequently directs a bath of an hour or two, while the parts are covered with tar or its oils. As applied in Vienna, the patient, after tarring, lies between blankets, completely naked, or sometimes underclothing of pure wool may be put on and the patient attend to business. Starch may be dusted on to hasten the drying.

In applying tar and its preparations, more is to be expected from an energetic friction at the time with a moderately stiff brush or flannel, than from a great expenditure of the substance employed. Dr. Wigglesworth, of Boston, in the January number of the *American Journal of Dermatology*, gives an interesting case of prurigo ferox where he prescribed most successfully Hebra's method of using his modified Wilkinson's ointment, and afterwards the application of oil of cade to the whole body, giving the bath thereafter for two hours.

It may be well to mention in this connection the local and general effects which may sometimes follow the use of tar. It may produce an acute eczema, some skins not tolerating the substance at all, while in others an acne is developed from closure and irritation of the sebaceous orifices, while Neumann asserts that the vapor of tar acts in the same way locally; as in workmen in factories where tar was manufactured or employed, this eruption was seen on the exposed parts, face and arms, while the body remained free. Again, the constitutional symptoms following the application of tar to one-third or more of the body are described as being quite severe in exceptional instances. They are, a high fever, fulness and pain in the head, pain in the stomach, vomiting of a blackish fluid, together with dark-colored fecal evacuations and urine. The latter may be darkly stained without having any great significance, this being often the only symptom, and will generally become lighter colored even under the continuance of the remedy. The addition of sulphuric acid to such urine develops a strong odor of tar, and a beautiful blue color results from the addition of chloride of iron.

Common wood-tar applied pure has many disadvantages, among which are its odor, color and stickiness, which may in a measure be rectified by combination with other substances, its efficacy being greatly increased, especially by a union with alkalies.

One of the most acceptable and useful preparations of tar is found in Guyot's solution, "Goudron de Guyot," a French secret remedy; in it the odor is masked very agreeably; it mixes perfectly with water in all proportions, and discolors the skin to a very moderate degree; moreover it dries rapidly and leaves very little stickiness. The late Dr. H. D. Bulkley had occasion to use this, when in Paris, for a very obstinate case of psoriasis in the person of a N-

lady, in whom the acute symptoms had been greatly aggravated by the treatment prescribed by Continental physicians. On returning to this city he succeeded, with the aid of Mr. Mittendorf, pharmaceutist, in imitating it, producing a most perfect watery solution of tar by means of caustic potash, which I now present for the first time to the profession. It has since borne the name, "*Liquor picis alkalinus*," the prescription for it being as follows: ℞. Picis liquidæ, ʒii, Potassæ causticæ ʒi, Aquæ ʒv. M. ft. sol. This, like the French solution, may be mixed to any extent with water, and is, in my experience, one of the best methods of employing liquid tar. The odor is not unpleasant; when diluted the clear solution is but little sticky, and it has the advantage that it can be washed off readily with water; the stain caused by it is also slight. This I have used in all degrees of strength, from one teaspoonful in a cup of water up to the pure fluid. The potash heightens the anti-pruritic effect of the tar, and the relief given by it is often immense; I will mention a single case:—

Mrs. M., aged 32, of intensely nervous temperament, with insanity in the family, and the subject of general paralysis eleven years ago, lasting four years, sent for me last April on account of a most severe lichenous eruption occupying the entire exterior surface of the right arm and extending over the shoulder upon the back. She is a literary lady, and was accustomed to spend at least twelve, sometimes sixteen or eighteen hours a day in writing, reviewing, correcting proof, etc., thus using the right hand and arm constantly. The eruption had commenced at the wrist eight months previously, and had extended ever since. The itching and burning she described as horrible, and the marks of her nails bore abundant testimony to that effect. She had been using various remedies under a physician's direction, each one aggravating the trouble, the culmination being reached in a wash containing sulphuret of potash, the pain and burning from which was almost insupportable, while the itching made life a burden. I gave her, together with internal treatment and an hypnotic, the above watery solution of tar, directing that she dilute it six or eight times, or use it of a strength, to give relief. She employed it with about six parts of water and the relief was immediate and perfect. She has since used it much stronger, even to the pure solution, under which the disease has disappeared, with the exception of one or two patches, which were removed by the application of blistering collodion twice.

I have used this solution with advantage in eczema, both in its chronic stage with thickenings, and in the more acute forms where exudation has about or nearly ceased, and the itching is intense. I have employed it in children with delicate skins. In chronic cases with infiltration it may be rubbed in full strength.

I have used this also with good success in four cases of lupus erythematosus, in varying strengths, the pure liquid being well borne after a while. The redness and thickening have diminished and the

improvement is manifest; the cases are still under treatment. The effects observed in psoriasis have been satisfactory as regards relieving the itching and diminishing the congestion and thickening, but caution must be observed in hastily judging of the effects of any remedy, external or internal, in this disease, which with its obstinacy is still so remarkable for its ready yielding to treatment in some instances, and even disappearing for a season spontaneously, *in spite* of medical interference. I find notes of ten cases in which it was advised, and in those cases seen afterwards the results were favorable, most of them continuing the remedy at last accounts.

In using the "*Liquor picis alkalinus*" it is well to remember the caustic potash which it contains, a drachm to the ounce, double that in the officinal liquor potassæ. For this reason Mr. Mittendorf attempted a more concentrated solution with less of the caustic, and succeeded with the formula: ℞. Picis liquidæ ʒ ss, Pot. caustic ʒ j, Aq. destillat ʒ j. M. ft. sol., in which the potash is in only about one-half the quantity. This also forms a clear solution with water. I have not used this, but it will prove of service where the action of the tar is desired rather than the alkali. Watery solutions were also made with carbonate of soda (not the bi-carbonate, which failed to combine) after the following: ℞. Tar., Carb. sodæ, aa ʒ ij, Aquæ ʒ iv. M. ft. sol. Likewise with carbonate of potash, as follows: ℞. Norwegian tar ʒ iij, Carbonate of potassa gr. xxv, Water ʒ v, Alcohol, a few drops. M. Here we have rather the action of the tar, the alkali being a mild one and only gr. xxv ad ʒ j. This solution, however, forms a milky emulsion with water.

Water alone will take up a certain amount of the active properties of tar, dissolving a small portion of the acetic acid and empyreumatic oil, including creosote and resinous matter, acquiring a sharp empyreumatic taste, the odor of tar and the color of Madeira wine. This is of service in the scaly affections, also as a wash sponged lightly over an exuding eczema, which is afterwards to be covered with an ointment. Tar-water is made by pouring four parts of water on one of tar, shaking them frequently together, pouring off the infusion and filtering it through paper. Hot water is said to extract more of the properties of tar than cold.

Hebra's celebrated compound tincture of green soap, the "*Tinctura saponis cum pice*," so highly praised by Anderson and others, deserves all the commendation I can bestow upon it. Wilson says, "We have nothing more competent to quell a raging pruritus than Hebra's famous lotion," which is composed of equal parts of tar or one of the oils, the German potash or green soap and alcohol. It is exceedingly valuable in the treatment of chronic eczema, psoriasis, etc., rubbed

well in, pure or diluted, and it is on account of the well-known virtues of this preparation that I expect much from the somewhat similar compound presented to-night of tar and potash, it having the advantage of possessing a much larger share of potash, which is invaluable in checking cell formation and removing effused products; it also forms a clear solution with water—Hebra's making an emulsion.

Tar mingled with alcohol alone, *tinctura picis*, in varying proportions, is of great service in certain conditions. I have employed it with great advantage, made with equal parts of tar and alcohol, in impetiginous eczema of the beard, applied even where there were acute inflammatory pustules.

The dispensatory directs a preparation of glycerinated tar, thus: ℞. Liquid Tar, Glycerine āā ℥ vi, Starch in powder ʒ ii. Warm the glycerine, mix with the starch, then add the tar and heat quickly to 212° Fahr. Strain if necessary, and stir while cooling. Dr. Piffard of this city presented a similar preparation to this Society some time since, also a glycerate of cade. I used this preparation a little, but without any very satisfactory results. I should expect it, however, to be serviceable in certain cases.

Another method of employing tar locally is in the form of soaps; of these I have seen several varieties, but have made practical use of but two: Constantine's Persian Healing or Pine-Tar Soap, and the Juniper Tar Soap of Caswell, Hazard & Co. Both answer the purpose of mild stimulants to the skin very well, but I have never seen the great benefit from them which we could wish from such a combination. It is hard to determine their real efficacy, as with me they have always been given in conjunction with other measures. Not infrequently, however, I have met patients who had previously used them of their own accord for various skin troubles without any benefit. They are irritating to some skins. Wilson advises the juniper-tar soap a great deal, and I have thought that I have seen benefit from it in scaly eczema, psoriasis, pityriasis and indolent acne.*

Finally, the efficacy of oakum in the treatment of bed-sores and indolent ulcers is undoubtedly due to the tar it contains.

II. *Preparations and Uses of the Oil of Cade.*

The oil of cade has been employed very frequently in a pure state, brushed directly on the skin. For the introduction of the oil of cade we are indebted largely to the French school, and to M. Bazin in particular, although Hebra has also used it on a very extensive scale. I saw impetiginous eczema of the scalp treated successfully in Paris

* It was remarked in the subsequent discussion, that tar-soaps were valuable as reducing to a minimum the irritation attendant upon the necessary employment of soap in some form or other.

by repeated applications of the pure oil of cade, also a case of chronic eczema of the scrotum with great thickening, removed by Hebra with renewed paintings with the same. Bazin advises the *huile de cade*, pure or diluted with sweet almond oil, in lichen and psoriasis and the vegetable parasite diseases.

I have used oil of cade very extensively in the form of an ointment with oxide of zinc, of each a drachm to the ounce of rose ointment, in the treatment of eczema, and when prepared well this forms a most agreeable application, allaying the itching to a very great degree. In eczema of children, in almost any stage save the very acute, I direct the crusts to be removed by poultices or oil, and cloths spread with this ointment to be kept constantly in apposition, to the total exclusion of air and water. Sometimes, however, when the crusts are not very thick, or when the skin has been much irritated by injudicious treatment or neglect, this ointment is best applied directly, it sufficing to soften the crusts which are removed with each renewal of the ointment. The old ointment may be wiped off, but never washed. My inclination now, however, is greatly in favor of the *oleum rusci*, next to be mentioned, or our ordinary tar ointment properly diluted, the preference for the latter being based principally on the good effects obtained with the liquor *picis alkalinus*, before spoken of.

Oil of cade is very commonly employed in forming the compound tincture of green soap of Hebra, as is also the oleum rusci.

Hardy unites cade oil with the glycerine ointment, as follows: ℞. Glycerine, 30 grammes, warm and add starch sufficient to reduce it to the consistence of ointment, mix carefully with this oil of cade, 4 to 6 grammes, and allow it to cool. It forms a very elegant preparation. Dr. Chapin (*Bost. Med. and Surg. Jour.*, April, 1859) combines it with the acetate of lead, thus: ℞. Oil Cadini ʒ ii, Glycerine ʒ v, Sol. plumbi sub-acetate ʒ i, to be rubbed over the affected part every night.

Wilson calls the following a "most certain and powerful anti-pruriginous lotion:" ℞. Oil of cade, Spirits of wine āā ℥ i, Water ℥ vi. M.

III. *Oleum Rusci.*

This oil claims, I think, more attention than it has hitherto received. It is the thickest of the tar-oils, and has by far the least unpleasant odor: the consistence is a great consideration in the opinion of Neumann, and when diluted its odor not at all disagreeable. Its color, however, is darker than the oil of cade, which sometimes is a consideration, when exposed parts are to be treated. My experience has shown it to be stronger, that is, more stimulating, than the oil of cade, its preparations and applications being the same.

IV. *Oleum Fagi.*

This, as before stated, is rarely seen in this country. It is the common tar of Germany, entering largely into the therapeutics of skin-diseases at Vienna. It is a component part of Hebra's famous "Kursalbe," a modification of Wilkinson's ointment, after this formula: ℞. Olei fagi, Flor. sulph., āā ʒ iii, Cretæ alb. pulv., ʒ ii, Saponis viridis, Axung. porci, āā ʒ vi. M. ft. unguentum. I have not found any special virtues claimed for the oleum fagi, nor, indeed, do the German pharmacopœias give it at all; I insert it here for completeness alone.

THERAPEUTICAL INDICATIONS FOR THE USE OF TAR.

Some judgment is necessary, and some experience, to know just the moment to employ tarry preparations, and just which form will best suit the case in hand, for a routine treatment in the use of this remedy will be surely followed by want of success. Chiefly is it to be remembered that tar is a local stimulant, and even when it gives relief from pain and itching it acts in this manner, as Anstie has shown that food and alcohol relieve pain, reduce excessive secretion, increase local nutrition, etc., in virtue of their stimulant properties.

Tar, then, as a local stimulant fulfils three indications: 1st, to check irritation or relieve itching; 2d, check secretion or diminish the formation of scales; 3d, Improve nutrition or remove cell deposit. The first and last of these are intimately connected, the first being frequently dependent on the last, as in true prurigo, when the papules give rise to the itching by the cell pressure on the nerve termini, a condition seen also in chronic eczema. Bearing in mind these three modes of operation of tar, let us see where it is contra-indicated.

Take first the disease psoriasis, in which it has won, perhaps, its greatest reputation, and in which, as we have seen, it was recommended by Willan nearly seventy-five years ago. When there is some itching with burning and hyperæmia, with the development of new spots, any strong preparation of tar will certainly do harm, and the disease requires a soothing treatment, emollient baths, together with diuretics and mild cathartics. But even here I have seen relief given by the *Liquor picis alkalinus*, very largely diluted (say ʒ i. to ℥ i. water), and applied without friction. In chronic cases, where there are excoriations or cracks, tar will irritate. When, however, the disease has lasted for a time, remaining in a measure quiescent, we may safely venture a very considerable amount of stimulation, proportioned to the extent of the eruption. At the College Clinic the most common form used in such cases has been Hebra's compound tincture of green soap, rubbed well in after the removal of the scales, by washing with

green soap, by scratching, or a water-dressing, or, if they are very hard, a poultice. And I may here say, that whatever preparation of tar is chosen, it is next to useless to simply apply it over the hard, imbricated scales, as will most certainly be done unless the physician directs definitely to the contrary. When the mixture contains a considerable amout of potash, as Hebra's soap tincture or our alkaline solution, this will often be sufficient to remove the scaly accumulation if well rubbed in.

When the tendency to scaling is not very great, but where thickening and redness still remain, we may try more decided stimulation, using the *unguentum picis liquidæ*, the pure empyreumatic oils, or the *liquor picis alkalinus*, up to full strength, or the ship-chandlers' tar undiluted, as in the case before given.

Equally valuable, in my estimation, is tar in the management of eczema, and with a proper selection and mode of application, will benefit at some period a large share of the cases of this very common and troublesome disease. But here, even more than in psoriasis, must a proper position be taken, or the remedy is worse than useless, inasmuch as the acute stage and condition of eczema bears a greater proportion to the chronic than in psoriasis. In this, pain, heat and inflammatory swelling are as a rule definite contra-indications to the employment of any of the products of destructive distillation, while thickening of the skin without acute inflammatory action, itching without pain or burning and chronicity, call loudly for some preparation of tar. Again, lasting pain on application, with increased heat of the part, indicate clearly that the use of tar should be abandoned for the present, at least; while absence of feeling, or a sense of relief from its use point to a continuance of the remedy, it may be, in augmented strength. The oil of cade in zinc ointment, ʒ i. ad ℥ i., is perhaps my most frequent prescription of tar, unless it be the caustic solution, brought forth so prominently in this paper. This latter is so convenient and serviceable that it can be left in a measure to the patient to dilute it to suit the feelings and condition of the parts, as in the case of lichen or papular eczema already narrated. A good method is to use the wash and apply zinc or some other mild ointment thereafter, repeated once or twice, daily.

In lupus erythematosus, tar will sometimes act wonderfully well, either applied pure as one of the oils, or rubbed energetically on, in the *tinctura saponis cum pice*, or our alkaline aqueous solution. The two latter I have employed with a fair measure of success, but very much must not be expected from this or any other remedy in a disease so notoriously rebellious to treatment. When the tar seems to irritate the surface, when there is heat, swelling and extension of the

disease, it must be discontinued at once, and should never be used while there is an acute inflammatory condition of the parts.

The tars have been extensively employed from time to time in the treatment of the vegetable parasitic diseases, Bazin using the oil of cade to a great extent in favus, brushing it directly on the skin, undiluted or mixed with other oils. Tinea tonsurans can be cured by keeping the spots painted continuously with one of the pyroligneous oils, or with repeated frictions with tar ointment. I have used the compound tincture of green soap and tar, but the color and odor of tar are obstacles to its use in exposed positions where other means will answer. Nayler gives, with recommendation, the treatment employed on a large scale in tinea circinnata in a London district school; the preparation is made after this formula: ℞. Iodinii pur. ʒ ii, Ol. picis (sp. gr. 853) ℥ i. M. et solve. These should be carefully mixed, otherwise an amount of heat will be generated and the iodine dissipated. This is rubbed in freely after the hair has been cut short, and allowed to dry on, one application being sufficient to cure recent cases, but in the more chronic it needs to be repeated three or four times. It does not cause irritation or inconvenience.

Various means have been devised for avoiding the color and disguising the odor of tar. It was hoped that the former was obtained in carbolic acid, which, however, has proved itself far inferior to tar in efficacy,—but of that hereafter,—while the odor may be in a measure corrected by the addition of some of the essential oils—Hebra commonly adds a little lavender to his compound tincture; Guyot's *goudron* has very little of the smell of tar. The *liquor picis alkalinus* smells more of the caustic potash than of the tar, and when diluted is very little offensive.

Such are a few of the interesting points which have occurred to me in the study of this single remedy. Much more might be said, but I have already exceeded my intended limits in time, and I must beg leave to defer the consideration of the products of tar, as creosote, acetic acid, turpentine, pitch, and resin, also of coal-tar, and its derivatives, carbolic acid, etc., to a future occasion, if the Society shall honor me with an invitation to appear again before them.

VIII.

THE LOCAL USE OF TAR

AND ITS

DERIVATIVES IN THE TREATMENT OF SKIN DISEASES.

BY

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(PART II.)

In our former article * we discussed the preparations and mode of employment of common tar and its oil, also the oleum cadini, oleum rusci and oleum fagi; it remains to examine the nature and applications of the other results of destructive distillation, namely, pyroligneous acid and its products, acetic acid and creosote, and pitch, likewise turpentine, resin and resineon, as also coal tar, with its carbolic acid and naphthalin; finally, petroleum.

When wood is submitted to a high temperature in closed vessels its organic elements are separated and pass off in vapors, which may be largely condensed into two liquids of different densities and properties; these are, crude pyroligneous acid and tar. If the wood is burned coarsely in pits for the production of the tar of commerce, these two are united, forming the *pix liquida* of our Pharmacopœia, from which the acid may be obtained by distillation. Pyroligneous acid furnishes us with much acetic acid, which likewise results from an acetous fermentation of certain vegetable substances, the same which are susceptible of vinous fermentation.

Pyroligneous acid was used considerably in skin diseases in former years, mainly, it appears, for its antiseptic power, dependent upon the creosote it contains, and was applied to sloughing gangrenous ulcers with the best results; it was also used in the parasitic diseases, where its action is assisted by its acetic acid as well.

* Archives of Scientific and Pract. Med., Feb., 1873, pp. 123-133.

Acetic acid is officinal in three different strengths: the glacial, sp. gr. 1,065; commercial, sp. gr. 1,047, and dilute, sp. gr. 1,006.

Glacial, or mono-hydrated acetic acid, HO $C_4H_3O_3$, is a decided irritant to the skin, and when kept applied pure, will produce vesication; it has been found very effectual in removing warty growths, and a moderate patch of tinea circinata may be cut short at once by a thorough application of this acid. Dr. Buck of Germany reports* a great measure of success in psoriasis following the local use of strong acetic acid painted on the patches after removing the scales with soap and water and friction. The tissue becomes white and puffed out, and the surrounding tissue inflamed; the smarting at first is moderately severe, but subsides in the course of fifteen minutes. This is to be renewed when the scales fall off in a few days. By this means the eruption is said to be removed easily within eight weeks, no eschar being left. The property of allaying itching, which we noticed as belonging so markedly to tar, is found also in acetic acid, which when diluted as a wash will ofttimes control the intolerable pruritus of urticaria and other affections: its action, like that of tar, depends upon its stimulant properties. Acetic acid in various dilutions has been found to greatly mitigate the pain and improve the condition of cancerous ulcerations.†

Creosote. Much confusion has existed with reference to creosote, it being described as a derivative of both wood and coal tar, whereas the two products are quite distinct, although resembling each other, the substance from coal tar being crude carbolic or phenic acid, creosote resulting from wood tar, the German pharmacopœia naming especially that from the beech, *oleum fagi*. Much that is sold for creosote is said to be the impure carbolic acid,‡ coal tar furnishing in proportion many times the amount of this acid to the creosote of wood tar.

Shortly after the discovery of creosote by Reichenbach, in 1830, it seems to have been most extensively employed in dermatology and with very good success, and has since held quite a prominent place in the treatment of skin diseases, although its odor prevents its very general use. In its pure state it may be brushed over indolent or gangrenous ulcers beneficially, but placed in contact with the healthy skin for ten or twenty minutes it induces superficial inflammation. It has been employed to remove nævi, applied two or three times a day, more or less diluted. Excoriation, ulceration and gradual disappearance of the nævus ensues, leaving a smooth and sound cicatrix.§

* Berlin klin. Wochensch. Am. Practitioner, Sept. 1872.
† Brit. Med. Journal, April 21, 1866.
‡ Dispensatory, 1872, and N. Y. Med. Jour. 1869, p. 161.
§ Braithwaite, XI. p. 186.

Creosote is said to unite in but two proportions with water: one part to eighty of water, and one part of water to ten of creosote; it is however soluble in all proportions in alchol, ether and alkaline solutions.

Creosote is of greatest value in the scaly diseases, as also in relieving itching, particularly in chronic eczema; it is also useful as a wash in burns and chilblains; for the latter Devergie advises the following ointment:—℞. Creosoti, Liq. opii subacet, āā gr. x Ext. opii gr. iss. Adipis ʒj. M. Creosote has been strongly recommended in erysipelas, in the strength of two drachms to the ounce of ointment, almost a specific effect being claimed for it; also painted full strength over the inflamed surface.* Squire has recommended to use creosote in chronic psoriasis, in the proportion of two ounces to one of white wax, the ointment to be rubbed firmly into the eruption morning and night, after removing the scales. Anderson has found it useful, but too irritating in some cases. He adds from five to ten minims to ointments for the purpose of allaying irritation of the skin. Tilbury Fox employs six drops of creosote with six grains of the nitric oxide of mercury to the ounce, in cases of psoriasis in hospital practice.‡ The officinal ointment of creosote is of the strength of half a drachm to the ounce.

Analogous to creosote, and probably depending upon it for any medicinal virtues it may possess, is common wood *soot*, which has been used in earlier times locally in many skin affections with asserted excellent and rapid effects. It was prescribed mostly in the form of a decoction, made by boiling two handfuls of soot in a pint of water for half an hour, and has been applied to parasitic eruptions and also to burns. Cazenave gives an ointment of a drachm to two ounces of lard, others a drachm to the ounce, which is reported to have been very successful in curing obstinate cases of chronic eczema.

Pitch.—Several different substances pass under this name, Pix Burgundica, Pix Canadensis, Pix liquida or common tar, treated of in our former article, and Pix nigra, the residue from the distillation of wood tar, together with coal-tar pitch. These substances are all mildly stimulating; entering into the composition of plasters which act by their counter-irritant effect upon the skin, they may in some cause considerable local inflammation. The older writers on dermatology recommend ointments of pitch for the cure of scabies, prurigo, and the scaly diseases. I do not know of their use in later times. The pix nigra enters into the composition of the *Emplastrum fuscum*,

* Am. Jour. of the Med. Sci., July, 1848, p. 152.
† On the Treatment of Diseases of the Skin. London, 1872.
‡ Skin Diseases. London, 1873.

much used in Germany for boils, etc., as in the formula: ℞. Camphor ʒ ss., Picis nigræ ʒ vi., Ceræ flavæ ʒ ix., Plumbi oxid. rub. ℥ ij., Olei olivarum ℥ iv. M. To be melted together till a little burned.

Turpentine in its natural state is seldom used in medicine, but on distillation yields the *oleum terebinthinæ*, or spirits of turpentine and *resina*, both of which are of occasional service in cutaneous therapeutics. Oil of turpentine has been highly recommended in burns in the *linamentum terebinthinæ* introduced by Kentish in 1797, and again brought forward by Greenhow in 1831 and 1838, and which has since become officinal. It is made by adding, with heat, twelve ounces of resin cerate to half a pint of oil of turpentine. The parts burned or scalded are to be covered at once with this on lint, to the total exclusion of air, avoiding the healthy parts.* A good liniment for chilblains is composed of equal parts of spirits turpentine, tincture of aconite or belladonna, and soap liniment.† Oil of turpentine is said to cure the itch very speedily, by simply sprinkling the bedclothes and night-dress with an ounce and a half of the substance, the cure taking but one night.‡ Turpentine has been given internally with good results in certain hemorrhagic affections, and purpura rheumatica is reported to have been cured by it.§

Resin is an active ingredient in basilicon ointment, our officinal *ceratum resinæ*, one of the most commonly used ointments in chronic ulcerations, and often prescribed in eczema of the legs. It is well to remember that this is certainly stimulating and rather provokes suppuration, and is consequently contra-indicated in acute inflammatory states, instances of the forgetfulness of which fact I am constantly meeting with.

Resineon is given by Neumann as an ethereal fluid, colorless in its fresh state, turning dark afterward. It is one of the products of distillation from wood-tar, is very quickly absorbed, and soon imparts the odor of tar to the urine. He employs it in psoriasis after the following formula: ℞. Resineon, Petrolei, āā ʒ i., Saponis viridis, Axung. porci., āā ℥ iss., Pulv. pumicis q. s. ut ft. unguentum. To be rubbed in well. Hebra mentions it.

Coal Tar.—This substance, *pix mineralis*, is but little used in cutaneous medicine, although its derivative, carbolic acid, has gained considerable reputation in the treatment of skin diseases. Anderson‖ indicates the employment of coal tar in certain scaly stages of eczema, and gives a prescription whereby an emulsion is produced on dilution with

* Stillé, vol. i. p. 622.
† Tilbury Fox—Skin Diseases. London, 1873.
‡ Am. Journ. of Med. Sci., July, 1848, p. 152.
§ Stillé, vol i. p. 617.
‖ A Practical Treatise on Eczema, 2d edit., p. 109.

water to suit the requirements of the case, and which he imagines represents, in a measure, the "*liquor carbonis detergens*," an English patented preparation. It resembles our watery solution of tar, *liquor picis alkalinus*, before given, with the exception of forming an emulsion with water instead of a clear solution. The following is Anderson's formula: ℞. Picis mineralis ʒ ii., Spts. rectificati ℥ ii., Cola et adde Liquoris ammoniæ fort. ♏viii., Glycerin (Price), ʒ vi., Aquæ destillat. ℥ xii. M. Sig., sponge the parts two or three times daily. The "liquor carbonis detergens" he alludes to as an excellent preparation. He also uses coal tar in eczema in the form of an ointment, thus: ℞. Picis mineral. ʒ ii., Glycyrini ʒ iii., Adipis unguent. ℥ iss. M.

Coal tar is also used for its disinfecting and antiseptic properties, and is applied to fetid gangrenous or sloughing ulcers in the form of a powder, made by mixing from one to three parts or more of coal tar with one hundred of plaster of Paris, forming a uniform grayish, pulverulent mass. I saw this used largely in Vienna by Professor Zeissl, as an application to gangrenous and unhealthy ulcerations, especially those resulting from buboes. The results were excellent, a healthy action replacing the destructive process, and all offensive odors were checked. It was laid directly on the diseased surfaces by means of a spatula, large cavities about the groin sometimes being filled up with several ounces of the preparation. This was removed in about twenty-four hours, generally caked firmly by the exudation, and the parts were syringed to free the wound from particles of the dressing, and then filled anew with the powder. The treatment was considered a success.

V.

ON THE EMPLOYMENT OF CARBOLIC ACID IN DERMAL THERAPEUTICS.*

BY

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NOTWITHSTANDING the fact that this acid has been discovered nearly forty years, and has become an article of almost daily use with many, it has but recently obtained a place among our officinal drugs.

Carbolic acid is generally found in the shops in the form of a transparent oily fluid, and in prescribing for is to be written for in drops or minims, inasmuch as the crystalline form is soon lost after exposure to the air from the absorption of a very little moisture; also the crystals melt at from 95° to 106°, and are readily liquefied by immersing the bottle in warm water. I am told by one druggist that the carbolic acid sold for pure acid is kept liquid by adding a drachm of water for each ounce of crystals, and this they reckon at a drop to the grain; another adds five per cent. water, by weight. The acid is but sparingly soluble in water, Crace Calvert says, 3 parts in 100, *i.e.*, gr. xv ad ℥i; Lemaire gives 5 to 100, *i.e.*, gr. xxiv ad ℥i; this proportion may be much increased by the addition of from five to ten per cent. of alcohol or acetic acid; it is perfectly soluble in alcohol, ether and glycerine, and partially so in glacial acetic acid. Mr. T. A. Redwin, in a paper before the British Pharmaceutical Conference, advises always to dissolve the crystallized carbolic acid (Calvert's) in the proportion of one part by weight of the acid to six of glycerine, forming a carbolate of glycerine, which can be diluted as required.†

The local effects of carbolic acid in skin diseases are, I believe, referable to three modes of action,—its stimulant, anti-septic and anti-parasitic powers. Its anti-pruritic powers depend to a great degree

* Continuation of the author's paper "On the local use of tar and its derivatives in the treatment of skin diseases," in Nos. 2 and 3 of this Journal, pp. 123 and 272, Feb. and March, 1873.

† N. Y. Med. Journ., vol. xii., p. 448.

upon its stimulating effect, as in the case of the preparations of tar already mentioned, and also on a specific benumbing of the sensory nerves, often, however, I conceive, upon its destruction of the pediculi or acari which have been the cause of many of the cases of pruritus passing under the name of prurigo. Its antiseptic virtue Prof. Lister, of Glasgow, holds to be due to its destructive action upon certain minute organic germs in the air, which entering open wounds cause a decomposition of the blood or serum, and consequent inflammation and suppuration.* This view has been opposed by Dr. Wolfe of Aberdeen, Sir J. Y. Simpson of Edinburgh and others.† Of its parasiticidal powers we will speak later.

Pure carbolic acid acts powerfully upon the skin, but its destructive effects are very superficial. It coagulates the albumen, and so produces a white surface, the depth of which may be increased by repeated applications. Wilson has employed it successfully as a local anæsthetic, previous to cauterizations in lupus and epithelioma.‡ Dr. Bill, of the U. S. Army, reports a similar anæsthetic effect, having laid bare the radial artery on his own arm, the incision of the integument being rendered painless by the application of carbolic acid. He has since employed this means constantly with uniform success in all minor cutting operations. He first applies for fifteen minutes or half an hour a weak solution of carbolic acid, either by compresses or soaking the whole part, then traces with a camel's hair brush, dipped in strongest acid, the course of the intended incision.§ Dr. Andrew H. Smith, of this city,‖ also made some experiments on his own person in this direction, painting carbolic acid of about 85 per cent. on the forearm. "For about a minute there was a slight burning sensation, after which the integument became entirely insensible, the cuticle being whitened and shrivelled, and the spot slightly elevated. An incision was then made about half an inch through the whole thickness of the skin. This was done without even feeling the contact of the knife. The capillary circulation seemed not to be materially interfered with, as the blood flowed as freely as it would from a similar wound under ordinary circumstances; the reparative process was also not impaired, adhesion taking place immediately. Three hours after the application of the acid, a needle could be thrust freely into the skin without causing pain." He also used it in two cases before incising a whitlow, which operation was then almost painless.

* Lancet, March 16, 23, 30, April 27, July 27, and N. Y. Med. Jour., Vol. 6, p. 264, and Vol. 9, p. 152, and Braithwaite, 58, p. 127.

† Braithwaite, 56, p. 124.

‡ Journal of Cutaneous Medicine, Vol. 4, No. 13.

§ Amer. Jour. of Medical Sciences, Oct. 1870, p. 573.

‖ The Medical Record, June 1, 1872, p. 231.

Lister also mention its local anæsthetic effects.* The pure acid has also been applied directly to wounded surfaces, and injected into the cavity of boils, whitlows and abscesses with excellent reported results. It has also been applied in a pure state with success to venereal vegetations; also mixed with camphor, thus: ℞. Camphor gr. xv., Acid carbol. ʒ j. M. Heat to deliquescence; two or three applications serving to remove them.† Likewise in primary syphilitic sores by Dr. Holmes Coote.‡

As a wash for indolent ulcers, especially when attended with fetid discharge, a watery solution of from 8 to 15 grains of carbolic acid to the ounce is one of the best, but in my experience it will carry the healing process but to a certain point, when other means serve far better to promote complete cicatrization.

Burns and scalds have been very extensively treated by this means with excellent results, Professor Pirrie, of Aberdeen, being one of the first to try it.§ It is but to dissolve the acid in linseed or olive oil, ʒ ss or ʒ j ad ʒ j, also in the linimentum calcis, ʒ j ad ʒ jv, with which cloths are to be saturated and kept in contact with the injured surface, covered with some impermeable dressing, as gutta-percha paper.‖ Dr. Squibb thinks harm is done by too strong solutions of carbolic acid in burns, and has seen one of the strength of from two to four grains to the ounce give relief, whereas a strong solution produced a pain exactly like that of the burn.¶ He has often experienced its benefits in his own person, once after a scald from a jet of steam.** The same has been found serviceable as a dressing to blistered surfaces. I have used with very good results an ointment of carbolic acid, ♁ j. ad ʒ j., in frosted fingers and toes, with ulcerations, the pain subsiding at once, and a healthy reparative action ensuing.

From the beneficial effects obtained in these and other inflammations of the skin it was thought that carbolic acid would prove exceedingly useful in eczema, at once allaying the itching and pain, preventing suppuration and mildly stimulating the diseased surface to healthy action. I regret that these hopes have not been realized in my practice, although some record success with it. I am certain that it does harm in many cases of acute eczema, and not infrequently see patients who have had their trouble much aggravated by the use of

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* Braithwaite, 58, p. 129.
† N. Y. Medical Record, July 15, 1871, p. 223.
‡ Brit. Med. Journal, April 25, 1868.
§ Lancet, Nov. 9, 1867, p. 575.
‖ Lancet, Feb. 1, 1868, p. 181; and Cincinnati Med. Repert., Oct. 1869.
¶ N. Y. Med. Jour., Vol. ix., 1869, p. 158.
** N. Y. Med. Gazette, April 18, 1868, p. 236.

this substance in various ways under the direction of a physician. If it is used at all in exuding eczema, I believe it should be greatly diluted, not stronger than two to four grains to the ounce, although it is reported that a seven or eight grain solution ended up chronic infantile eczema with fresh accessions.* Anderson has seen cases where a four and a half grain lotion has removed excoriations and ulcerations almost completely within a week, but also advises the employment of from half a grain to four and a half to the ounce.†

More may be expected from carbolic acid in the chronic forms of cutaneous disease, and here let me first mention its internal use, which has been tested extensively by Kohn and Neumann, of Vienna,‡ and also reported on by others. Their results show that it has an effect in diminishing the hyperæmia of the skin and in alleviating the pruritus to a considerable degree, six to nine grains a day accomplishing all that a much larger quantity will. Psoriasis at its inception was checked thereby, but temporary benefit being observed in old cases, inasmuch as the remedy after removing the congestion was incapable of reducing the thickening beneath the patches. Prurigo and pruritus were relieved, the papules of the former subsiding as the scratching was obviated. Prof. Binz, of Bonn, also testifies to its value in certain cases of pruritus.§ Dr. Güntz, of Dresden, has given carbolic acid internally to at least 150 patients and finds that cases of pruritus alone with no lesion of the skin are relieved and cured by it. In true prurigo the results are uncertain, sometimes good, often bad; the remedy must be continued for some time to produce any great effect, and often the patient is relieved only while taking the medicine. No satisfactory results in eczema, psoriasis, lupus or syphilis.‖ Dr. Rothmund¶ speaks in the highest terms of its internal use in prurigo and pruritus, advising, after repeated trial, the injection of it hypodermically, giving about $\frac{1}{6}$ of a grain each time from a solution of about four grains to the ounce. All the results have been unsatisfactory in the treatment of syphilis by the internal use of this acid. Sigmund** agrees with Neumann and Kohn in this.

Externally applied, carbolic acid, like all the tars, is of greatest service, besides its parasiticidal value, to be considered hereafter, where there is chronic hyperæmia and thickening, together with consequent

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*N. Y. Med. Jour., Sept., 1868, p. 515.
†A Practical Treatise on Eczema. 2d Edit. London, 1867, p. 111.
‡Archiv für Dermatologie und Syphilis, 1869, pp. 219 and 424.
§Practitioner, Jan., 1871, p. 59.
‖Archiv für Dermatologie und Syphilis, 1872, p. 551.
¶Aertzliches Intelligenzblatt—quoted in Half-Yearly Compend. of Med. Sci., Jan., 1873, p. 861
**Practitioner, July, 1872, p. 61.

scaling and pruritus. These elements are found in varying degrees in chronic erythema, chronic eczema, psoriasis and prurigo, and in these do we obtain the best results from the use of carbolic acid. As a rule, ten or fifteen grains to the ounce in solution, or twenty in oil or ointment, is quite strong enough, certainly to commence with, and even a less strength will often relieve the itching. Anderson gives the following formula often used by himself:—℞. Cryst. carb. acid, ʒ ij; Price's glycerine, ʒ vj; Rectified spirit, ℥ jv; Distilled water, ℥ j. M. Sponge the affected parts two or three times a day, and also when itching is complained of. Dr. M'Nab* reports great success in psoriasis following the use of carbolic ointment, one part to four of lard, by weight, applied every night at bedtime with gutta-percha tissue covering. The disease is treated internally with arsenic and medicines to place the system in health, but he considers the specific local inflammation to be "more amenable to the direct curative influence of carbolic acid than to any other therapeutic agent with which we are acquainted." Dr. Liveing agrees in general with Dr. M'Nab, and advises its internal use, saying that it certainly cures some cases of psoriasis in which arsenic has failed to produce its usual effect.† F. P. Mann‡ gives a case of inveterate psoriasis where an aqueous lotion with Donovan's solution internally removed the disease of two years' standing in a girl aged fifteen. My experience has not been favorable in the treatment of psoriasis with carbolic acid, but I have never used it in the strength which these writers recommend. Most writers consider it as inferior to the preparations of tar in the treatment of the scaly diseases, having, however, the great advantage of the absence of color.

Remembering the great advantage obtained by combining tar with a large amount of alkali, in the "*liquor picis alkalinus*," and that caustic potash is known to be serviceable in removing effused products, I have imitated this watery solution of tar in the substitution of carbolic acid in the same proportion, after the following formula:—℞. Acidi carbolici, ʒ ij; Potassæ causticæ, ʒ j; Aquæ, ʒ v (by weight). M. ft. sol., a combination which I do not find recorded anywhere, except the mention that a little liquor potassæ will increase the solubility of carbolic acid. I present this prematurely, not having had time to record sufficient cases to warrant my recommending it, and desiring that others should make a trial of it in comparison with the alkaline solution of tar given in my former paper. This alkaline carbolic solution, "liquor carbolici alkalinus," forms a clear mixture

* Lancet, March 19, 1870.
† Lancet, April 23, 1870, and The Treatment of Skin Diseases, 1870, p. 44.
‡ N. Y. Med. Jour., September, 1868, p. 315.

with water in all proportions, and can safely be left to the feelings of the patient to apply of a strength to suit the case. In its pure state it acts quite powerfully on the skin, it being one part in four by weight of carbolic acid, and has double the amount of caustic potash found in the officinal liquor potassæ. Diluted, one drachm to the ounce of water, it gives a lotion of 15 grs. to the ounce, proper to apply to indolent ulcers, and to relieve moderate itching, or as a parasiticide, where the alkali assists in disintegrating and removing the scales. In small spots of tinea it can be applied full strength. Diluted two or three times it answers, when well rubbed in, to relieve the itching of eczema of the legs, or may be applied up to full strength in these cases and in psoriasis, as was recommended with the tar solution. In psoriasis the potash will serve to remove the scales, causing the acid to penetrate to the diseased cells.

Carbolic acid is also well applied in the glycerine ointment, made by stirring powdered starch into boiling glycerine till the consistence of an ointment is reached, to which, after cooling, the acid may be thoroughly mixed to suit the requirements of the case,* from 5 to 10 grains and upwards to the ounce. It may, however, be often incorporated in any ointment, that of the oxide of zinc, simple cerate, ung. stramonii, ung. resinæ, etc.

Carbolic soaps have been employed, containing 20 per cent. of this agent, and are recommended by some.† I have never used them.

The most decided and certain action of carbolic acid in dermal therapeutics is in its effect upon the parasites which infest the human skin. It is destructive to life, as has been shown where small animals have been exposed to a vapor of carbolic acid in confined vessels, also lice on a rose-bush, where both were killed by a solution of about two grains to the ounce.‡ Mould likewise is speedily arrested in its growth when brought into near contact with a solution of 1:500 ;§ Neumann has also proved that fermentation is arrested, and the penicillium glaucum, mucor racemosus, and other fungi cease to grow when treated with very dilute carbolic acid.‖ Carbolic acid has also caused death in the human subject, in two cases from the asserted absorption of it when applied for the itch, another when injected into the rectum, another when swallowed.

Most of the parasitic diseases have been reported as cured by carbolic acid ; with some it is quite common in the treatment of scabies.

* Journal of Cutaneous Medicine, Vol. 4, No. 16, p. 324.
† British Medical Journal, Nov. 26, 1870, p. 582.
‡ Am. Jour. of Med. Sci., July, 1868, p. 33.
§ New York Med. Gazette, April 18, 1868.
‖ Archiv für Dermatologie und Syphilis, 1869, 3, p. 440.

Rothmund* gives :—℞. Acid carbolic, ʒi ; Ol. lini, vil. glycerine, ℥ij, M., patients to be rubbed thrice daily with ; even old cases yield in 2½ days. Lemaire says that in itch a simple application of one part of carbolic acid in forty of vinegar and one hundred of water is sufficient to kill the acarus.† I have used a lotion of carbolic acid, gr. x, xv ad ℥j, in dispensary practice in cases of phthiriasis corporis, it having the further advantage of allaying the itching speedily, an important item in many cases. But whatever treatment is adopted in the animal parasitic diseases, it must never be forgotten that clothing may remain a permanent source of infection, and a cure can be obtained only by disinfecting the garments, as it were, either by subjecting them to considerable and prolonged heat, as baking in an oven many hours, or thoroughly saturating them with the carbolic lotion, a cleanly procedure.

The diseases dependent upon vegetable parasites, *tineæ*, are treated by many with carbolic acid, and in my experience recent cases may be removed with a moderately strong lotion or ointment, but after the disease has lasted for a time very little benefit can be derived from it. The reason for this is found in the superficial nature of the trouble in the first instance and its deep-seated character in the second, extending even into the hair-follicles and between the epidermal cells, a cause of failure with other really excellent parasiticides. Another cause of the want of success in the use of carbolic acid in these affections is its imperfect application. Neumann observed‡ that a solution of 1:500, or about one grain to the ounce, will arrest the growth of microscopic fungi only for a season, and after three days' respite they grow as luxuriantly as ever ; a solution of 1:300 (*i. e.*, gr. jss ad ℥j) will check their development for fourteen days only, but when concentrated it destroys their life. If the acid is used, therefore, it must be in some strength, and it is well to cover it with some impervious dressing, as gutta-percha paper, to prevent evaporation. A mixture of equal parts of carbolic and acetic acid is effectual, but can, of course, be applied to only a very limited area at once. From the experiments of Neumann we learn that a continuous atmosphere of carbolic acid must be maintained in order to destroy the fungus.

My experience in the treatment of the dermatophytic diseases with carbolic acid has not been very great, as I much prefer sulphurous acid and other remedies ; what I have seen of its action, however, in cases which have come to me, has been unfavorable to its employ-

* Archiv für Derm. und Syph., 1872, 3, p. 464.
† Sydenham Year Book, 1861, p. 440.
‡ Archiv für Dermatologie und Syphilis, 1869, 3, p. 440.

ment. Nevertheless the testimony in favor of it in this class of affections is great. Küchenmeister has applied carbolic acid with the most satisfactory results, both in medical and surgical practice, as a means of arresting putrefaction and preventing the development of fungi.* James Watson, of Edinburgh, considers it one of the most efficient parasiticides known, reporting cases of favus and alopecia areata cured by it.† Lemaire in tinea uses a solution of one part of acid, forty vinegar and one hundred water with good results. Parasitic sycosis is reported as cured by creosote with equal parts alcohol and water.‡ Neumann§ advises in favus, after removing the crusts and epilating, to wash the affected parts twice a day with sapo viridis and keep them moist with a lotion composed of ℞. Acid carbol., ʒ j; Glycerine, Alcohol, āā ℥ j; Aquæ destillat., ℥ vj. M., recommending the same in tinea tonsurans. Dr. Browne, of Liverpool, obtained very good results in tinea tonsurans and circinnata with carbolic acid, but not better than that following other treatments; but one case of favus was thus treated, and that successfully, with an ointment of a drachm of acid to an ounce of glycerine thickened with spermaceti, applied under gutta-percha.‖ The results were decidedly unsatisfactory in tinea versicolor, and he suggests as a reason that in this disease the parasite is situated more in and beneath the epidermis, which is hardened by the carbolic acid, preventing its own penetration. This is in a measure prevented in the alkaline solution before referred to, *liquor carbolici alkalinus*, by the solvent action of the caustic potash.

Carbolic acid has been used lately as an external application in small-pox, dissolved in oil in the proportion of 1:12. This is kept applied constantly and abundantly on cotton wadding over all the affected parts; the swelling of the skin rapidly subsides, the course of the disease, when this treatment was adopted from the beginning, seemed more favorable and the disease appeared to be less contagious.¶

Naphthalin has not been used of late in dermatology; as far as I can learn, most of the statements in regard to it are based on the trial given this substance by Dr. Emery in the Hôpital St. Louis in 1842. Naphthalin is a white crystalline substance, fusible at 176°, soluble in alcohol, ether, naphtha and the oils, but insoluble in water. It is obtained in the distillation of coal-tar after the gaseous and

* Deutsche Klin. No. xiii. Sydenham Year Book. 1860.
† Edinburgh Med. Jour., Jan. and Sept., 1864.
‡ Braithwaite. 51, p. 190.
§ Hand Book of Skin Diseases. Amer. Edit., p. 428.
‖ Practitioner, Dec., 1869, p. 352.
¶ Wiener Med. Wochenschrift. No. 6. 1872.

liquid elements have passed over and the residue is heated to 390°–410°; it has a faint odor and excites a peculiar hot, pricking sensation when applied to the tongue. Emery found decided benefit from it in twelve out of fourteen cases of psoriasis.* He used it in an ointment composed of naphthalin ℈j to adipis ʒ v, also of twice that strength. When applied too strong it caused a burning heat and irritated the skin considerably. The advantages claimed for it are its freedom from color and slight odor.†

Petroleum.—The only application of this substance to the treatment of diseases of the skin which I can vouch for is in the destruction of head lice, pediculi capitis, for which purpose I use it constantly in dispensary practice. Cases of poisoning by absorption of corrosive sublimate washes are on record, while there is always some danger of the remedy being incautiously taken internally with serious results; this reason, and its convenience and thorough efficacy, has led me, among the poor, to make use of the common kerosene, or rectified petroleum, found in almost every house. Even when there is a considerable amount of eczematous inflammation with raw surfaces, I direct the head to be thoroughly saturated, and bound up with a cloth with kerosene for twenty-four hours, fresh oil being added several times, then to be washed thoroughly and freed from scabs, when the pediculi will be found dead, and, I believe, their nits also. The head is now soaked with cod-liver oil, morning and night, without washing, for some days, when it may be again cleansed and cod-liver oil reapplied till cured. This plan I have used almost exclusively for nearly three years, and to me it is very satisfactory, and I may say I have never found that any object to it; the stinging from the first application of the kerosene is transitory. Petroleum oil has been proposed as a cure for scabies, as it instantaneously kills the parasite, and is at the same time a disinfectant against the *larvæ* which are wont to be found in the wearing apparel and bed-clothes.‡

Neumann recommends petroleum in favus, the parts after epilation and washing with sapo viridis to be kept covered with compresses soaked in it.

* London and Edinburgh Monthly Jour. Med. Science, Jan., 1843.
† Cazenave—Note to American Edition. 1852, p. 224.
‡ Glasgow Medical Journal, January, 1865, p. 482.

[Extracted from the Transactions of the American Medical Association, Vol. xxv., 1874.]

With the Compliments of L. D. Bulkley, M.D.

A NEW ANTIPRURITIC REMEDY.

By L. DUNCAN BULKLEY, A.M., M.D.,
OF NEW YORK.

EIGHTEEN months ago we presented to the profession the "*liquor picis alkalinus*,"[1] which had proved itself valuable in certain cutaneous affections in relieving itching in many instances, and whose value in this and other directions is daily becoming more evident. The failure of this as an antipruritic in some cases, as might be expected, has led us to the adoption of the compound here presented, which has thus far rendered inestimable service, but which has not, to my knowledge, been heretofore commonly known.

More than a year ago I noticed in a medical journal the item that equal parts of hydrate of chloral and gum camphor when rubbed well together are converted into a fluid substance—which observation was repeated in the *Boston Medical and Surgical Journal* of Feb. 19, 1874, with the variation that the substances were to be mixed together, and the conversion would take place in a few days; no therapeutical suggestion was made in either instance. Stepping into a drug store, I immediately tested the truth of this, and found, after a few minutes' trituration in a mortar of powdered camphor and Schering's chloral, that in place of two crystalline substances a transparent colorless fluid existed, of the consistency of glycerin—no solvent having been added. It at once occurred to me that this would be of value in allaying itching, inasmuch as camphor acts ofttimes very gratefully when locally applied for this purpose, while I have long employed the chloral internally to the same end.

I therefore had some ointment prepared after the formula:—

[1] ℞.—Picis liquidæ, f℥ij; potass. causticæ, ℥j; aquæ destill. f℥v; ft. liq. picis. alk.; use diluted. Archives of Scientific and Practical Medicine (Brown-Séquard), February, 1873.

℞.—Pulv. gummi camph.,
Chloral hydrat., āā ʒj.
Ung. aquæ rosæ, ℥j.—M.

Rub the chloral and camphor carefully together till fluid results, then add slowly to the ointment, mixing well.

This when applied to the healthy skin produces no effect, but possesses great power in arresting itching without overstimulating the parts. It does not answer when the skin is at all broken; it is then necessary to employ other less irritating agents, but the burning sensation caused on its first application lasts but a few moments, while the relief occasioned I have known to last for hours or even a whole day.

This compound is soluble also in almond oil, alcohol, and ether to a considerable strength, as also in collodion. I have never employed it other than in the formula above given, except that I have ordered it of a less strength, half a drachm of each to the ounce, also increased to a drachm and a half of each to the same quantity. I should expect a solution of moderate strength in collodion would prove useful in localized itching. I will give two or three illustrative cases:—

Mrs. J. C. L., aged 34, seven months pregnant, was distressed with a most intense itching which commenced six weeks previous to her being referred to me by Dr. H. B. Sands, on Dec. 4, 1873. The itching was first noticed on the left arm near the shoulder, then on the right and on both shoulders behind, and soon the outer surfaces of the legs and the region of the waist became affected. When first seen her condition was indeed pitiable, the more so as she had become convinced that the distress would last until confinement. Her general condition was poor, she looked worn and nervous; pulse 104, and weak; tongue coated; appetite very poor, and bowels irregular in action. She gave the history of being subject to neuralgia, and of having had a similar attack of pruritus when not pregnant nine months previous, which disappeared on the use of six sulphur baths. The skin when seen presented only the appearances due to scratching, namely, excoriated points and lines, resembling those seen in phthiriasis, but no traces of pediculi could be found nor indeed could any suspicion of this exist.

Diuretic and tonic treatment seemed to effect very little, but some relief was afforded by the alkaline tar-wash before referred to, diluted about one part to sixteen of water. This was only temporary, and chloral and bromide of potassium internally failed to procure even a quiet night. The chloral and camphor in ointment,

a drachm each to the ounce was then prescribed and the relief obtained was immediate and permanent, that is, with the application repeated every few hours at first, for she never really suffered from the itching after its first use, and in six days she had no further need of it. It is but right to state that she continued the same internal treatment as before, but she did not require any medicine to induce sleep. On the disappearance of the cutaneous symptoms a hoarseness occurred, evidently nervous in origin, which lasted until delivery, as it had accompanied also a previous pregnancy to the end.

Mrs. F. C. M., aged 32; a lady of highly nervous organization who was in the habit of greatly overworking in a literary line; has had several attacks during the last two and a half years of a very peculiar pruritus extending down the right arm and on the right shoulder behind to the median line. The itching and burning she describes as horrible, and the skin was found to be hard and scratched. On former occasions she had obtained very great relief from the *liquor picis alkalinus* diluted, with internal medication, but nevous exhaustion had been repeated so often by excessive literary work that all the old measures failed to give relief at the last attack I witnessed. The nerve distress is further shown by a partial writer's cramp.

She was directed to abstain from using the right hand as much as possible, substituting the left, and was given the chloral and camphor ointment, a drachm each to the ounce. The relief following the first application was prompt and perfect, and a few days sufficed to remove the itching entirely, she using the same internal treatment which before proved ineffectual; no return of the pruritus has yet occurred after the expiration of several months. Whether on a recurrence of the skin trouble the remedy will still exercise as beneficial an influence it is impossible to say, but the relief afforded in this instance was as striking as it was gratifying. I will give one more case:—

Mrs. B———, aged 56, a large, fleshy lady, was kindly referred to me by Dr. A. L. Loomis, for a *pruritus vulvæ* which had lasted six months. During the previous summer she began to have more or less irritation about the vulva, and had scratched herself to relieve it, continuing to do so till seen by me in Dec. 1873. A very large number of remedies had been most judiciously applied, with but very little relief to the distressing itching, and on inspection the parts were found to be greatly thickened and discolored

with more or less excoriation reaching down on the thighs and toward the anus. The clitoris was enlarged and elongated, but no follicular condition of the mucous membrane, no cervical erosions, nor any apparent cause of the trouble could be discovered. The urine was examined and gave no indications of glycosuria. The irritation and itching of the whole region she said were beyond description, and her troubled expression of face told the same story. She was then keeping the bed and using hot hip-baths night and morning with some comfort. These latter were directed to be exchanged for fomentations with very hot water frequently repeated, and iron, quinine, and Fowler's solution were given, also a diuretic mixture later.

Some considerable amelioration was obtained subsequently by the alkaline tar used in the other cases, but soon this seemed to have lost its effect, and various other applications failed to cause improvement. After about two weeks' treatment, the camphor and chloral ointment was prescribed with the happiest results, the itching disappearing entirely sometimes for seven or more hours after its application, while in the mean time the patient gained in physical condition, and the thickened state of the parts which had been caused and kept up by scratching subsided, and she was able to be up and around with a great degree of comfort. There still remains some itching at times, and the patient has just left for Europe for change of scene, etc., though for the last two months or so the irritation has been very slight. The relief afforded by the ointment in this case far exceeded that obtained from any other measure attempted.

In using this remedy the only caution I know of is to see that the parts to which it is to be applied are not greatly if at all excoriated by scratching, as the application is then pretty painful, and the unprotected derma is irritated and possibly inflamed thereby.

From its success in these three forms of itching here exemplified, namely, that of pregnancy, that of the vulva, and that due to a pure neurosis as in the second case, I would suggest the employment of the camphor and chloral compound in the general pruritus attending the senile alterations in the skin, also in anomalous cases and in those of chronic papular eczema or lichen, where itching is a prominent feature. Likewise in the *pruritus hiemalis* lately described by Dr. Duhring, of Philadelphia, in the *Philadelphia Medical Times*, of which I have seen some instances.

The ointment loses strength on standing exposed, and should be made fresh very frequently.

ARE

ECZEMA AND PSORIASIS

LOCAL DISEASES OF THE SKIN,

OR ARE THEY

MANIFESTATIONS OF CONSTITUTIONAL DISORDERS?

BY

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ECZEMA AND PSORIASIS LOCAL DISEASES OF THE SKIN, OR ARE THEY MANIFESTATIONS OF CONSTITUTIONAL DISORDERS?

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uggestion of a local pathology of diseases of the skin is of com-ly recent date, and stands in bold contrast to the older humo-doctrine, which ascribed all these diseases to a morbid entity, a *morbi*, seeking exit from the system, and whose escape is bene-and the positive demonstration within the present century of a use of several cutaneous maladies (as dermatitis, the parasitic s, etc.) which had, for ages, been regarded as expressions of blood s an achievement of which modern medicine may justly be proud. discovery of a local origin of certain skin lesions, and the fact of mblance between some of the forms of dermatitis and the erup-f impetigo, lichen, eczema, etc., have led some to claim, still , that most, if not all, of the diseases affecting the skin are either lts of local external causes, or are local diseases originating in hically deranged action of the elements of the skin; a view, the n of which has undoubtedly been promoted by a natural reaction e too exclusive, humoral doctrines previously entertained.

ed hardly be said that in arguing a constitutional origin and of eczema and psoriasis, I do not desire at all to return to the umoralistic doctrine of disease, but seek to keep entirely within nds of recent chemical physiology and pathology, while at the me I by no means ignore the importance of local cell-action, as pear later. Nor does the recognition of a constitutional nature of and psoriasis, by any means necessitate a belief that it is danger-heck or remove these diseases by local measures, for experience ved the contrary; it does, however, demand an investigation of l causes, and a removal, as far as possible, of systemic disorders, hereby elements of disease are removed and the general system d, while the eczema and psoriasis are cured.

e further presentation of the subject of the nature and origin of and psoriasis, it will be advisable to separate the two diseases less; I will, therefore, in each instance speak first of eczema, n make the application to psoriasis; because, although they re-each other in many important particulars, and have many points act, their dissimilarities are such as to cause confusion if they are y instance spoken of together.

local pathology of eczema and psoriasis has rested largely on three s: first, on the results obtained in the local treatment of these er diseases of the skin, especially in the larger hospitals in Europe. *those in Vienna*; second, upon microscopical researches; *and, third*, as far as relates to eczema, on a clinical ar

scopic study of the artificial eruptions produced on the skin by irritating substances, idiopathically and experimentally. We will dispose of the last of these first.

Now, while there is as yet no absolute proof that the pathological process excited artificially in the skin differs essentially from that taking place in acute eczema, we need not conclude that eczema is of local origin because its eruption resembles artificial dermatitis. If we accept one artificial eruption as eczema, we must accept all as such, from the large blisters following cantharides, heat, and cold, to the discrete, pustular eruption caused by croton oil or tartar emetic, or the slight erythema of the mildest irritant. Moreover, many of these artificial eruptions resemble erysipelas even more than they do eczema, and yet there will be few who will hold that true erysipelas is a local disease of the skin; again, the eruptions of croton oil and tartar emetic resemble those of smallpox and syphilis, without this being any argument against the constitutional nature of these latter, while the eruptions produced by the insect in scabies and by lice are frequently confounded with eczema. These lesions are all purely local, there is simply a local response of the cells and capillaries of the over-stimulated part; they are all but forms and varieties of inflammation of the skin, and are properly termed dermatitis, and bear no more relation to eczema than does the inflammation of a sprained joint to true rheumatism. In a very small proportion of persons, such irritations may become the starting point of true eczema, but in them I believe that the elements of the eczematous diathesis may always be discovered. A demonstration of the essential difference between these artificial eruptions and eczema is shown by the fact that it is not uncommon to induce dermatitis, as by a blister, for the cure of chronic eczema, as also of psoriasis.

It is necessary, therefore, in the present study to remember the distinction between eczema and dermatitis, for undoubtedly much that has been treated for the former is but the latter, and of course no argument can be drawn from therapeutical results obtained in dermatitis as to the local nature of eczema. In regard to psoriasis also, we have to clearly exclude, not only the scaly syphiloderm, but also all syphilitic influence; true psoriasis, the lepra of Willan, has nothing to do with syphilis, not even in the way of a later hereditary transmission, as has been suggested, nor must it be in any way confounded with the dry, scaly forms of eczema, or with the true leprosy, the elephantiasis of the Greeks.

Before proceeding systematically to examine the several points regarding the local or constitutional natures of these diseases, let us consider, for a moment, the question of the possibility of a double origin of the diseases under consideration, whether they can own two natures, being sometimes local and sometimes constitutional. In regard to the skin lesions in the contagious exanthemata and syphilis, no question exists that their origin is solely and always due to the introduction of a poison, which acts through the system, and that the cutaneous manifestations are but one exhibition of their effect. Passing now to such general diseases as gout and rheumatism, whose etiology is more deeply hidden, we do not doubt that the local phenomena observed in each are always the result of the same constitutional condition, some of the earlier links in the chain of cause and effect being recognized in functional derangement of certain *organs, and* a consequent sub-oxidation or imperfect elaboration of the *elements of food*, and an absence of healthy dis[illegible]tion of tissue, and

en we speak of cold or external injury as being the cause of gouty or umatic inflammatory action in a part, we understand readily that it only intended to signify that it was the *exciting cause*, which determined at that particular spot should be affected, or that the disease should evelop at that particular time. The same line of thought might be xtended to other diseases, showing that it is irrational to deny the constitutional origin of a disease unless its local nature can be established in a manner answering every requirement, as is the case in the parasitic diseases of the skin; quite as impossible is it to exclude local causation, when the constitutional nature fails to account for every condition.

Great error has, therefore, been made, I believe, by those who look only or mainly at the local causes, and argue therefrom a local nature of eczema, they forgetting the established principles in general medicine in regard to predisposing and exciting causes of disease. This is verified by the fact of the difficulty of producing a true eczema artificially, at will, in a person not subject thereto either in self or family (if indeed it can ever be done), and the impossibility of inducing a psoriasis by any local means.

Our conclusions then, thus far, are that eczema and psoriasis cannot be both local and constitutional diseases, that is, either exclusively, according to the case; and that the eruptions resembling eczema, artificially produced, are either ordinary dermatitis, with a strong tendency to spontaneous recovery, or are true eczema in eczematous subjects, in whom the exciting cause, instead of occurring in the ordinary way, has been artificially supplied, just as a gouty person might, by measures voluntarily applied, induce a true gouty inflammation of a joint. As before stated, we know of no claim to the production of psoriasis by local measures alone.

In the present study of the question as to whether eczema and psoriasis are local diseases of the skin or manifestations of constitutional disorders, I propose to develop the following points:—

(1) The nature of the eruption in disorders of the skin which are recognized to be constitutional, as the contagious fevers, syphilis, etc., drawing a comparison between eczema and psoriasis and these affections, and showing their points of difference.

(2) The nature of local diseases of the skin.

(3) The microscopic anatomy of eczema and psoriasis, with a view of comparison with that of the local skin diseases on the one hand, and with that of the constitutional on the other.

(4) The clinical history of eczema and psoriasis, in so far as they bear on the question, the points considered being (*a*) age, (*b*) sex, (*c*) location of eruption, (*d*) relapses, (*e*) hereditary transmission, (*f*) gouty and rheumatic symptoms, (*g*) urinary disturbances, (*h*) bronchitis, etc.

(5) The clinical history of some local diseases, to show the differentiating elements between constitutional disorders and those believed to be local, as epithelioma, verruca, keloid, parasitic and mechanical diseases of the skin, etc

(6) The effect of local treatment, and how far the success of local measures necessitates a belief in the purely local nature of the disease.

(7) The effect of constitutional treatment, and the internal and general measures of service in eczema and psoriasis, to show how far their success *proves that the diseases* which they remove are constitutional.

(1) In comparing eczema and psoriasis to the acknowledged constitutional disorders affecting the skin, contagious fevers, syphilis, etc., we must not, of course, press the similarity too far. We find, however, certain resemblances, as in the symmetry of development of the lesions, for eczema, if uninfluenced by local causes, will, when carefully studied, be found to exhibit this almost as clearly as psoriasis, whose bilateral disposition is so striking; the peripheral mode of spreading of eczema resembles much that of erysipelas, and the scattered eruption of psoriasis corresponds much to the mode of development of other exanthematous diseases, including syphilis. Eczema also is not infrequently attended with fever, in its more acute and general forms, and on the full, recent development of psoriasis there is more or less of malaise and prostration, and probably fever. The characters of the lesions in eczema and psoriasis are not entirely unlike those of constitutional diseases, which are marked by, first, congestion; second, exudation; and, third, if these former have been sufficiently severe, desquamation. The lesions of eczema and psoriasis are also superficial, and rarely, if ever, do they leave cicatrices, when uncomplicated.

(2) In contrast with these stand the characteristics of local diseases of the skin, marked by their utter want of symmetry (unless accidental), their extension depending either on a recognized cause, or being unexplainable, as in keloid, epithelioma, etc.; local diseases very rarely affect the whole integument, or even large portions, unless ichthyosis, of whose true nature, however, we know very little, be granted as such. Local diseases, moreover, acknowledge no constitutional connections nor fever; while, finally, the congestive element of eczema and psoriasis stands in striking contrast to its absence in local diseases, except, of course, where it is called forth by local stimulation. I am well aware that many cases of eczema present a number of the features of local disease, and that psoriasis occasionally is seen quite localized; but this is the exception, whereas it is rare to find exceptions in regard to the local diseases exhibiting any constitutional features; and, as we have concluded that eczema and psoriasis cannot be at one time local and at another constitutional, the weight of evidence, in this comparison, is decidedly in favor of the latter.

(3) The study of the microscopic anatomy of eczema and psoriasis is as yet in its infancy, and throws but little light on the etiology of these diseases; but, for a comprehensive view of the subject, we will briefly recall the main points in their histology, which will be seen to favor the constitutional rather than the local nature of the affections. The first anatomical change in eczema (reasoning from what is observed in artificial eruptions) is capillary congestion, resulting in capillary stasis and exudation in the tissue of the skin, producing more or less œdema. In some instances, not rare with us, the process stops here, or is arrested by treatment, and we have only the erythematous state, followed by moderate desquamation, the result of the impaired nutrition of the outer layers of the skin, a state very similar to the epithelial shedding in scarlatina, erysipelas, or measles.

If the exudation is too great to allow of absorption, it seeks egress through the external layers of the skin, or becomes organized as chronic infiltration. Biesiadecki believes that the fluid of eczema gains exit *through certain* spindle-shaped cells, which lie between the round and *polygonal cells* of the rete, these becoming so altered as to convey the *fluid, as through* direct channels. When the [illegible] is still intact

the hard, horny epidermis resists further progress and a vesicle forms; when the epidermal layer has been dissolved off or ruptured, the fluid oozes from the surface. Charpy[1] gives a somewhat different account of the genesis of eczema; still regarding the beginning of the disease as being in the corium, and consisting in a congestion of the layer just beneath the papillæ, he believes that the exuded fluid is absorbed by the deeper cells of the rete, in the intervals between the papillæ; that these cells become engorged until they rupture, whereby alveoles are formed; and that the increase of these alveoles terminates in the production of vesicles, upon the rupture of which cul-de-sacs are formed, whose walls furnish the further secretion.

In chronic eczema, the exuded plasma has become organized, and is seen as cell infiltration of the corium; the papillæ are much enlarged; the lymphatics, both in the papillæ and corium, are increased in size and dilated (Neumann); the bloodvessels are sometimes obliterated (Rindfleisch); and even the deepest parts of the skin are involved.

The anatomical and other relations of eczema have suggested to some a likeness between this and catarrh of the mucous membranes, and it may be well here to consider for a moment the nature of the mucous affection called catarrh, in reference to the bearing of this resemblance upon the nature of the diseases now under consideration. First, it must be remembered that it is no more proper to call all inflammations of the mucous membranes catarrh, than it is to name all those of the external integument eczema, or even dermatitis; the term catarrh but signifies the exudative feature, and the word eczema implies much the same. We have already separated and clearly differentiated many diseases of the mucous membranes, and it is highly probable that future study will show that there are many very different processes included in what is yet called catarrh, and ultimately their nature and origin will, we suspect, be as clearly defined as are now those of cutaneous diseases, or, it is hoped, far more clearly. That this is true may be judged from our present knowledge; thus, we have simple intestinal catarrh caused by the direct irritation of indigestible substances, a mechanical affair corresponding to ordinary dermatitis; we have an incontrollable diarrhœa, or catarrh, from the irritation caused by the circulation of effete substances in renal disease; there is also a mechanical catarrh from portal congestion in cirrhosis; we have also gouty affections of the various mucous surfaces; likewise the catarrhal complications of measles, those of syphilitic origin, etc., and I have long believed that much of the ordinary bronchial catarrh was truly eczema of that surface. Therefore, in likening eczema to catarrh of the mucous membranes, we by no means simplify matters in regard to its local or constitutional nature. Moreover, the common observation of catarrhal affections following a chilling of the surface, does not indicate necessarily their local nature, due wholly to the cold, for we see great differences in the results produced, dependent evidently upon constitutional states, the congestion due to the action of cold on the integument being only the exciting cause.

We will now consider for a moment some views in regard to the local nature of eczema propounded by Dr. Tilbury Fox, in the Lettsomian Lectures for 1869 and 1870.[2] He suggests that the capillary congestion is a *consequence* of cell-activity, arguing that mere capillary excitement

[1] *Annales de Dermatologie et de Syphiligraphie*, t. iii. p. 100.
[2] *Eczema, its Nature and Treatment*; London, 1870.

cannot give rise to eczema, because otherwise the erythemata would constantly overstep their limits. The element of the influence of the nervous system is largely considered by Dr. Fox, who believes that this abnormal state of the cells may be in response to "perverted innervation," as suggested by Hebra some time since; but while Hebra limited the action of the nerve influence to the production of "congestion and other disturbances of the circulation," Fox considers its influence in inducing cell proliferation a very necessary point to be admitted in eczema. That the latter is very true is shown by alterations of tissue plainly following and due to nerve lesions, and the same might be expected from the distribution of the nerve fibres even to the cells of the rete and epidermis.

But while a step in advance is made in recognizing the direct agency of the cell elements of the skin in the production of eczema (and independent cell activity can be no longer denied, as is shown in leucocytes), and while the influence of the nervous system in the production of cell changes is acknowledged, there is no proof that this cell change is really primary in eczema and psoriasis, and independent of constitutional conditions, and that it exists as a local affair; and this view finds little support beyond theory. It is a field, however, in which research is needed, and may perhaps be carried on with advantage, namely, the microscopical investigation of the apparently healthy skin of markedly eczematous subjects, both before and after local disease, as also a study of its nervous relations, both clinically and histologically. Should repeated, careful, and well verified microscopic studies demonstrate cell change in the earliest erythematous stages of eczema, and possibly also in the elements of the skin of eczematous patients before or after disease, it would do much to enlighten what otherwise must remain uncertain, namely, the part that the diseased tissues take in eczema, how far they are primary and how far secondary. The skin is the most favorable, if not the only, portion of the body on which very early pathological changes can be observed and followed, and research in this line may throw light upon the pathological histology of other organs.

That independent cell-action has much to do with inflammatory and other changes in the skin, is evident from the results of mechanical and chemical irritation, where, as in the case of the ordinary blister, the intervention of any blood influence cannot be suggested with reason; and that the cells are under very direct control of the nervous system is also very plain from the lesions in zoster, elephantiasis Græcorum, those occurring after nerve injuries, etc.; here the cells which under normal nerve control absorb just enough nutriment to maintain their proper relations, under perverted nerve control take on morbid action. Anatomical studies of the nerve trunks and branches in eczema might perhaps assist in our knowledge of its nature.

Psoriasis has been less studied microscopically than eczema, and little or nothing has yet been published of its genesis. The most striking histological changes in sections from older patches, as is known, consist in a great papillary enlargement, with thickening of the rete Malpighii to a corresponding extent, or nearly so. The papillæ are crowded with new cells, disposed mostly about the bloodvessels, with some infiltration of the corium; but the infiltration is not nearly as extensive as in chronic eczema, as might be judged from the clinical appearances.

Wertheim, from a microscopical study of psoriasis, concluded that the *patches were due* to some peculiar change in the capillaries of a *circumscribed spot.* Neumann considers that what [illegible] in thought were

enlarged and blocked-up capillaries were cell groups around them, but offers no suggestion as to the mode of origin of the patches. By the kindness of my friend Dr. A. R. Robinson, of New York City, I have had the opportunity of examining microscopically some sections from psoriasis, which confirm Wertheim's views, and throw some light on the pathological histology of this disease. The earliest specimen was taken from a papule of psoriasis but two weeks old, in which there had been but little scaling. The bloodvessels in the papillæ were very distinctly seen to be greatly enlarged, and in some places appeared to approach the surface of the epidermis very closely; in quite a number of places the bloodvessels had ruptured, and microscopic ecchymoses were plainly visible. In specimens from rather older patches the bloodvessels showed very distinct budding processes, and some of the vessels appeared completely blocked up; there was little or none of the new deposit of cells described by Neumann, and there was no possibility of mistaking the enlarged bloodvessels for cell heaps around them.

It will be thus seen that the microscopic changes in eczema and psoriasis do not differ so very much from those observed microscopically in some other chronic skin diseases, and that histology contributes but little to show the local nature of these diseases, except so far as relates to the studies of Wertheim, further verified by those of Dr. Robinson; and yet here no one can show that even those changes in the bloodvessels are primary. Fox, however, believes that psoriasis "consists primarily and essentially in a misbehavior of the cell-elements themselves—a perversion of the ordinary cell-life of the epidermis—a true tissue disease, in which the trophic nerves probably play the chief part," but, unfortunately, gives no reasons for his interesting supposition.

While this latter view finds little or no support in anything that has yet been reported of the pathological histology of psoriasis, there is a very slight foundation for it in a certain resemblance which can be made out between psoriasis and a disease of well-recognized local nature, namely, epithelioma, to which we would venture to devote a few words.

The elements which have suggested the comparison between the two diseases are: a similarity in some of their clinical features and modes of development, their anatomical disposition, the transformation of patches on the tongue, called psoriatic, into epithelioma, the asserted family relations of the two affections, and the occurrence of epitheliomatous growths on the faces of young persons affected with psoriasis. In regard to a similarity in their mode of development, the increase in both is by peripheral extension, to the extent often of forming a ring, with healing within. Anatomically, epithelioma is an outgrowth, or rather an ingrowth of epithelial elements, whether the more external ones of the skin or those lining glands; we have, as yet, no studies with which I am acquainted to prove it, but the true pathology of psoriasis may be an epithelial hyperplasy of somewhat similar nature, and the lengthened papillæ seen in it may be the result of the ingrowth of the rete. We have the same shedding of the outer epithelial layers in psoriasis as in epithelioma; on scraping both, by no means forcibly, not only are the outer dried layers removed, but the softer and more succulent portion next above the papillæ is also separated, and we have in both the bleeding, familiar to all. The presence of the fibrous papillæ in psoriasis prevents further progress in the scraping, or we might induce a destruction *similar to that in epithelioma.*

The only real histological support I have to offer to su

theory of the ingrowth of the epithelial layer in psoriasis, other than the well-known increase of the inter-papillary portion of the rete, is found in some of Dr. Robinson's sections, in which, in addition to the capillary change already alluded to, the sheaths of all the hairs showed outgrowths at their lower portions similar to those which have been observed in lichen ruber.

The transformation of what has been called lingual and buccal psoriasis into true epithelioma is now proven beyond doubt; of the true nature of the former affection, and its relations to ordinary psoriasis, however, we have little reliable information; it is certainly rare to find these mouth lesions in psoriatic patients, and many who have them have never had ordinary cutaneous psoriasis, and it is highly questionable if there is the slightest relationship between them.

Gaskoin affirms very confidently the hereditary relations of psoriasis and epithelioma. I have occasionally found both diseases in the same families, in intelligent private patients, but have never been able to satisfy myself of any relationship; the cases, however, have been far too few, and the time which has elapsed since I first investigated the connection, far too short, to form any conclusions therefrom. I have recently treated a young man with well-marked psoriasis, who exhibited perfectly developed epithelioma in front of the left ear. I would suggest this relationship between psoriasis and epithelioma as a profitable field for research, clinically and microscopically. If a relationship can be established, the local nature of the former may be demonstrated; for the present, however, this is not proven, and the constitutional relations of this disease, as well as of eczema, are so abundant and conclusive that we must here grant them the weight of argument and fact.

(4) We will now turn to a consideration of the constitutional relations of eczema and psoriasis, as exhibited in their clinical history. In regard to the age at which they occur, eczema affects all, from the cradle to the grave; none are too young, none too old to suffer from it. This is more the character of constitutional than of local disease; cancerous affections seldom, if ever, are seen in the young; warts (of the ordinary variety) seldom in the old; keloid very generally in middle life, both extremes being spared. The vegetable parasitic diseases rarely occur in the old; whereas in them are found changes in the skin, and diseases therefrom, not seen in young life. Psoriasis may be also said to prevail at all ages, though less frequently very early or very late in life.

Eczema and psoriasis both occur about as frequently in the male as in the female. In location, eczema spares no part of the surface, and, I believe, may affect every portion of the mucous membrane as well, while its development is very commonly symmetrical; these features are true also of psoriasis, and are those of general and constitutional diseases rather than of those of local nature. The tendency to recurrence in the same parts might be claimed as a local feature, but, in regard to eczema, the same exciting cause may be present again and again; and it must be conceded that tissues are undoubtedly weakened by disease, and more likely to be affected the second time than sound tissues; this is observed in gout and rheumatism, as also in affections of the mucous membranes.

But relapses in eczema and psoriasis furnish more indications of a constitutional than of a local nature, for fresh attacks of eczema are very *commonly* found to follow a depression of vitality; and I believe that *this is true of* psoriasis far more commonly than is generally conceded. *Moreover,* these eruptions by no means occ[illegible]me locations each

me. I have frequently observed that the spots of psoriasis fall almost not quite as often on new tissue as on the sites of a former disease.

There is no doubt as to the hereditary character of eczema and psoriasis. Whether the heredity consists in any general, constitutional habit, or whether it is simply a transmitted tendency to tissue-change, cannot be shown at the present time; in favor of the latter may be cited the transmission of mental and physical characteristics, cancerous disease, and ichthyosis; as instances of the former, we have the inheritance of syphilis, gout, and rheumatism, and the history of the occurrence of gouty, bronchitic, hepatic, and urinary troubles in the family of eczematous and psoriatic patients, in such a way as to show a connection.

If the claim of an inherited, perverted tendency of tissue could be established in eczema and psoriasis, which tendency lies dormant until called into activity by some exciting cause, it would still fail to explain alone why a cause which is at one time inefficacious, will, on another occasion, even in a much less degree, be sufficient to produce the disease.

This brings us to the study of the gouty and rheumatic symptoms, the urinary disturbances, and the bronchitis of eczema and psoriasis. That patients with these affections are the frequent subjects of the systemic derangements connected with or tending toward gout and rheumatism, as well as to the complete manifestations of these diseases, is very certain; this observation is of ancient date, and is strikingly confirmed by recent science. It is not very uncommon to find attacks of gout alternating with those of eczema and psoriasis, and clinical study shows that various disorders which may properly be classed under the name of functional derangements of the liver are very common in the subjects of these two diseases of the skin.

These systemic disorders are shown in the urine, which undergoes functional derangement in a large proportion of the cases of eczema and psoriasis. In a recent contribution to and study of the subject by the writer,[1] the following conclusions were reached: "Eczemic patients seldom pass large amounts of urine, the tendency being to scanty secretion, almost always unnaturally acid, with a specific gravity averaging above normal. Free uric acid, the urates, and oxalate of lime, abound; sometimes oxaluria is very persistent. Albumen is rarely seen. The urea and uric acid are often below the normal standard, although they may be in excess when a large portion of the integument is affected; indican has been found in pathological quantities. When the specific gravity is high, it may be due to an increase in the sulphates. The chlorides are diminished. Psoriasis sometimes alternates with phosphatic urinary deposits in gouty subjects. The fixed salts are increased. The urine shows generally a hyper-acidity, with deposits of uric acid, urates, and oxalate of lime, the contrary being the exception. The specific gravity is liable to great and unaccountable variations."

It may be claimed that these urinary changes are observed in persons also with no cutaneous disease, and that therefore there is no connection between the two. I am not yet in a position to prove exactly what changes in the urine necessarily accompany eczema and psoriasis, but mention those that have been actually observed to show that patients with these diseases are not in the perfect health often claimed for them, and, although a casual examination will often fail to detect any disease other than that of the outer integument, I assert that searching inves-

[1] *Archives of Dermatology*, October, 1875, p. 1.

on will seldom fail to demonstrate elements of disordered health, very ommonly shown in the condition of the urine. And as these are moved by appropriate remedies, the eczema and psoriasis improve, and *ce versâ*.

Not less striking, as indicative of the constitutional relations of eczema nd psoriasis, is the occurrence of bronchitis and asthma, conjointly or lternately, in the patient, or in his immediate family; the truth of this well attested by many writers.

The neurotic relations of eczema and psoriasis are also very interesting, nd indicate other than a local nature of the disease; but the subject is et too recent and unsettled for more than a mention in this place: I ave elsewhere[1] given a fuller study of it. Recorded facts, based on large inical experience, are needed greatly for the full and satisfactory deter- ination of many of the points here alluded to.

(5) Enough has perhaps already been said in reference to the clinical istory of local diseases, but a few points may be again alluded to with dvantage in connection with what has just preceded. No constitutional elations have been recognized, to my knowledge, in any of these; con- itutional remedies have no effect upon them. Their unsymmetrical haracter and irregular development have been mentioned, as also their emoval solely by local measures. Local diseases of the skin of external rigin are represented by the parasitic affections and dermatitis; idio- athic misbehavior of cells is exemplified by epithelioma and keloid; erpes zoster may be taken as a type of an acute local disease of the kin dependent on nerve elements; and ichthyosis of a chronic, local dis- rbance of general cell nutrition; the clinical history of each of these is miliar to all, and quite different from those of eczema and psoriasis.

Hebra, as is well known, has always stood as the representative of cal pathology and therapeutics, and it may not be uninteresting or nprofitable to refer briefly to his present views in regard to the purely cal nature of eczema, as found in the recent, second edition of his ork.[2] That I may not be charged with misunderstanding him, I wil note a section from the close of the long chapter on the Etiology o ezema (p. 462). After repeating what had been said in the forme lition to show the local nature of the disease, and after stating his dis- elief in any diathetic cause, he says: "While, therefore, we cannot cede to any peculiar or proper dyscrasia, we must, on the other hand, nfirm the fact that certain conditions of the human organism, partly ansient, partly permanent, at one time increase, and at another time iminish its susceptibility to agencies producing eczema. These physical nditions are called a disposition, or predisposing cause, *momentum dis- nens*, to distinguish them from the direct exciting cause of irritating gencies, and we are obliged to recognize these elements in the etiology f eczema, because experience confirms it."

"For example, we see an eczema on the hands and forearms of a youn irl who has been engaged in washing soiled linen, and we declare that e origin of the eczema is in the action of the lye, soap, hot water nd friction. Now, at the same time with this girl, there are man her females washing in the same lye, using the same soap, and livin nder the same circumstances, without acquiring eczema. Indeed, th

[1] *Archives of* Electrology and Neurology, November, 1874, and May, 1875. Reprinted G. P. Putnam's Sons. New York, 1875.

[2] *Lehrbuch* der Hautkrankheiten, Zweite Aufl.; Erlangen, 1874.

ery girl, who now has eczema, has been exposed to the same influences previously without becoming affected. What is the cause of her present susceptibility? A careful examination of her general condition will give the explanation. The girl who before was healthy, robust, and regular in her menses, has now lost her appetite, has become sluggish and languid, her appearance is pale and bloated, her menstruation is profuse; in a word, she has become chlorotic, and thereby eczematous. The remedies suitable for the chlorosis are now employed; the appetite and power of work return, the menses become regular, and the eczema disappears in spite of the continued influences of the agencies causing it. The same observation is made in reference to pregnant and nursing women; also in those suffering from chronic sexual disturbances. The latter must always be looked upon as favoring elements (a *momentum disponens*, or predisposing cause) which induce a *status minoris resistentiæ*, and allow an otherwise ordinary skin irritant to become an exciting cause, a *momentum excitans*."

After again claiming that we need no blood explanation of eczema, Hebra adds: "In order not to be misunderstood, we will, however, here again state that every eczema is not caused by a local irritation, but that it may be occasioned by diseases of the rest of the system."

Such clear and unqualified statements as to the constitutional nature and origin of eczema are unexpected from one so prominently known in connection with local pathology, and show that his opinions have latterly undergone considerable change. It must be remembered, however, that at the time of the first edition of Hebra's work, upon which his reputation as a local pathologist greatly rests, many of the crude theories of the past had not yet been completely overthrown; and also that within his experience many diseases which had formerly been considered constitutional, had been demonstrated to be purely local, as scabies, the vegetable parasitic diseases, plica polonica, etc., and that the success of local measures seemed to demonstrate to him that other affections were also local; he has, however, the candor to acknowledge his mistake.

(6) We come now to one of the most interesting and at the same time most disputed portions of our investigation, namely the relative effects of local and constitutional treatment as indicating the nature of eczema and psoriasis. Hebra and Neumann declare, in the most positive terms, that it is quite unnecessary to regard the constitutional relations of these diseases, except when they are striking, and those who have followed the Vienna School for any length of time can testify how completely this idea is carried out there. External remedies and measures are used there almost exclusively, it being the greatest exception to have any questions asked in regard to the general health; and internal medication, it may safely be asserted, is very rarely, if ever, employed in the hospital, in eczema and psoriasis, except by way of experiment; and yet these eruptions are removed in a very satisfactory manner. Does this, however, prove the local nature of the disease? In negation of this I need but suggest how the stiffness resulting from gouty and rheumatic inflammation is benefited by external counter-irritants and passive motion, while the origin of the serous inflammation and fibrous thickening is recognized as of constitutional origin. Syphilitic iritis may be subdued by atropine alone, and tubercular laryngitis receive great benefit from topical treatment; the ulcers of dysentery may be cured, and the discharge of leucorrhœa arrested, by local measures; and yet these diseases be manifestations of constitutional states.

But there is not the slightest influence exerted by local treatment in preventing the return of eczema and psoriasis, whereas we know that constitutional measures have considerable power to prevent relapses; this is, as is well known, less true of psoriasis than of eczema, but mainly, I believe, because of the neglect to carry out faithfully the proper measures for a sufficient length of time after the disappearance of the eruption. Again, in this country at least, local measures often fail to accomplish the desired end until constitutional measures are resorted to in addition. In considering the effect of local treatment as an argument for the local nature of eczema, it is well to bear in mind the distinction drawn early in this paper between dermatitis and eczema, for many cases treated as the latter disease are entirely local in character, the result of local irritants, possessing in themselves a strong tendency to heal when the irritating cause is removed and the inflamed surfaces protected, that is, are cases of dermatitis and not of eczema.

I believe true eczema and psoriasis to be constitutional states wherein ordinary irritants give rise to inflammatory changes in the skin, which form an important element of the disease, but which are no more its sole element than are the cutaneous phenomena of the exanthemata, leprosy, syphilis, etc. I believe also that single attacks of eczema, and of psoriasis, too, correspond in nature very much to those of such diseases as gout and rheumatism, in which the local changes have a greater or less tendency to self-limitation, although the effects of the disease may long remain. That is, as arthritic, pulmonary, or cerebral symptoms appear to be the culmination of blood-processes which we know as gout and rheumatism, so eczema and psoriasis are directly dependent upon somewhat similar, although as yet little defined, blood changes, the acute symptoms corresponding to those of rheumatism and gout, while the chronic local alterations in the skin answer to the gouty concretions on and in the synovial membranes, and to the rheumatic thickening of the valves of the heart or around joints long inflamed; and, as in gout and rheumatism, there is a tendency for the attacks to recur again and again, the health in the mean time seeming to be perfect, so in eczema and psoriasis the local phenomena may be manifested from time to time, without any very apparent constitutional disorder between, while the *product* of the disease, the cell infiltration, remains.[1]

Now but little can be done to arrest the acute phenomena of eczema by local means, other than soothing applications, and it is very difficult to check a developing psoriasis by outward measures; but the *results* in both may be removed by local stimulants, which induce cell activity within the bounds of health. I speak more especially of these diseases in adults, for infantile eczema exhibits more plainly the constitutional elements whose great activity renders local measures often very futile.

While, therefore, the arguments are against eczema and psoriasis *being* local diseases of the skin, it must be admitted that they *become* local diseases in their skin lesions, and as such may be amenable very largely to local treatment, as far as relates to the single manifestations of disease at any one time.

(7) Whatever may be the views of those who hold exclusively to the value of local treatment in eczema and psoriasis, no doubt whatever exists in my own mind, nor, as far as I can learn, in the mind of a large

[1] "*The Management* of Eczema," by L. Duncan Bulkley, M.D., Trans. Am. Med. Association, *vol. xxv.* 1874, p. 121. Reprinted. G. P. Putnam's So[illegible]

share of those who make skin affections a special study, that constitutional measures are both valuable and necessary to the cure of most cases of these diseases. And by constitutional treatment I do not mean arsenic alone, nor any one specific remedy, for truth demands the acknowledgment that specifics for diseases do not exist, unless it be with the two exceptions of mercury for syphilis and quinine for malaria. But by constitutional treatment I understand the employment of every measure for the cure of disease, which cannot truly be called local treatment.

Now my experience has been, as already stated, that most patients with eczema and psoriasis present anomalies in their urinary secretion, and in proportion as this exists have I found the congestive feature of the disease to be marked, and in the same proportion have I seen the diseases benefited by cathartic and diuretic remedies. A not inconsiderable number of patients with eczema and psoriasis are habitually constipated, and the diseases, with me, resist all local and other measures until this is remedied. Many are what is called bilious, and nitric acid will do more to cure their skin diseases than any other means. It is not at all uncommon, in this country, to find eczema and psoriasis in those who are extremely nervous, and cases are constantly met with where an enormous mental strain is keeping up the disease; here the constitutional measure of rest, with perhaps change of scene and climate, is imperatively demanded, together with nerve tonics of various kinds. In dispensary practice in this city a good portion of all eczematous and psoriatic patients exhibit the features known as strumous or scrofulous, and are more quickly and surely cured by the internal administration of cod-liver oil than by any other remedy, local medication either being used not at all, or playing a very unimportant part. Arsenic also is capable of entirely curing, that is, removing, eczema, and that tolerably quickly, *without the use of any local measures whatever*, as I have repeatedly witnessed and elsewhere shown,[1] and its power over psoriasis is acknowledged on all sides. Iron is indicated in a large share of our eczematous and psoriatic patients; others require such remedies as rhubarb and soda; and the vegetable tonics play an important rôle in our therapeusis.

Diet, hygiene, exercise, and bathing, are all essential in my opinion to a successful management of these diseases. I claim that patients who have been thus carefully managed not only recover from the individual attack under proper local measures much more quickly than when the latter alone are used, but that they most certainly are in a better condition to resist future attacks, and that relapses are far less frequent, and I claim that the clinical history of the patients shows this. The action of these measures is not local, is not directed to the skin; but by virtue of the influence exerted on the general economy, as well as on the affected tissues, they cure the diseases in question.

In this study I have not referred much to the opinions of writers on dermatology, because, with the exceptions which I have mentioned from time to time, the opinion is very general that eczema and psoriasis are constitutional disorders. By a constitutional disorder, as we now understand it, is not meant the existence of some peccant material or *materies morbi*, which the system endeavors to throw off; nor that the discharge

[1] Trans. Amer. Med. Assoc., vol. xxvii. 1876, p. 163; New York Med. Journ. Aug. 1876, p. 113; *Reprint*, "The Use and Value of Arsenic in the Treatment of Diseases of the Skin," *New York, Appleton, 1876.*

is in any way curative or beneficial to the system; nor that the removal of the cutaneous lesion can in any way or manner act prejudicially to the economy; but the expression, constitutional disorder, is understood in the same sense in which it can be applied to gout, rheumatism, chlorosis, leucocythæmia, scorbutus, etc. And it is used here in especial distinction from local disease—that is a pure and specific disease of the tissues of the skin itself, singly and alone—as the artificial eruptions, parasitic diseases, epithelioma, verruca, keloid, etc.

There are several elements of causation in infantile eczema which have not been touched on, partly because of want of time, and partly because observations are wanting as to their true effects in producing the disease. One is the occurrence of the exanthematous diseases; it has been observed by some that eczema followed soon upon these affections, and it has been thought that they left such an impression upon the cell-elements of the skin that these readily took on eczematous action, simply on the application of an external irritation. Now if they can have any causative effect in eczema, the exanthemata can also induce psoriasis, lichen, urticaria, etc. Whether, however, they act in any other way than as depressants, leaving the body and tissues in an enfeebled state, I cannot tell; it will be remembered that Mr. Hutchinson has recently claimed that the later lesions of syphilis are but the remains of the earlier, general, dermal phenomena. If the exanthemata had any real power to impress any tissue change on the skin, which should afterwards result in eczema, we could hardly conceive why this should happen in such a small proportion of cases; for, of the multitudes who go through these inflammatory skin affections of childhood, but few suffer from eczema afterwards; while many children have eczema long before undergoing one of the exanthemata. We cannot therefore accept any argument as to the local nature of these diseases drawn from the previous occurrence of the exanthemata.

Vaccination is another process which we not rarely see followed by eczema; do we suppose here a local cause (other than exciting), that is, does it induce any change in the cells of the skin whereby they are more prone to eczema? I believe not, because of the very general adoption of vaccination, and the very few cases of eczema immediately following; I need not in this presence state that there can, of course, be no blood-poisoning, no contagion of eczema by means of the lymph, even when taken from a vaccinifer suffering from eczema; we know of no transmission by this means except that of syphilis, unless it be a tendency to carbuncular inflammation, of which I have observed a number of cases, and which my friend, Dr. Frank P. Foster, tells me he occasionally meets with. The only agency which vaccination can exert in calling forth an eczema, is, I believe, simply that of a local irritant, acting in the same way as a burn or other excessive stimulation. I have seen psoriasis of a very marked character develop for the first time immediately after vaccination, but the event must of course be looked upon as a coincidence, or else we must conceive that the local tendency to cell-proliferation has furnished the starting-point, the fire which kindled the train all ready for ignition. The rarity of the observation of psoriasis immediately following vaccination shows the correctness of this view.

Equally useless and uncertain is it, in my judgment, to look upon dentition *in any other* light than as an exciting cause, not acting locally, it is *true, but probably* as a reflex irritation, and as such I believe it to be of *more or less importance*; but in view of the small proportion of teething

infants who have eczema, and the infinitely smaller ratio of those with psoriasis, other elements must be looked to for the real etiology of these diseases; this is shown also by the frequent occurrence of these diseases in those of older years, and before the teeth begin to appear.

Erroneous diet, however, I consider as an all-important and undoubtedly prolific cause of eczema in infants, a point which we cannot here enter upon, except to mention it as of weight in favor of the constitutional origin of the diseases under consideration.

That local causes are of very great importance in the etiology of eczema in infants, as well as in adults, is beyond doubt; such causes are the use of irritating diaper-linen, harsh bandages, too frequent and careless washing and drying, incautious exposure of the face to cold air, hot caps on the head, harsh attempts to remove the dried sebaceous matter from the scalp, etc.; but that the disease very frequently does not get well upon the removal of these irritants, and under local measures alone, is certain, and that a proper study and direction of constitutional measures will cure the disease, if proper local treatment is employed, is equally sure.

Psoriasis is observed so rarely in those of very tender years, that no conclusions can be formed respecting it; if indeed the disease in infants differs in any way from that of adults.

I have said nothing yet in regard to the relations supposed to exist between scrofula and eczema and psoriasis. This is a very difficult subject and one which needs clearing up, there being thus far no sufficient data upon which to base a scientific investigation of the matter; for, although many authorities state that there is a connection, the evidence of any causal effect is far from being established. Neumann states that among 308 eczematous children he found but 30 who were rachitic and 70 who were scrofulous, while among more than 3000 scrofulous and rachitic children he found none with eczema.

For the proper study of this relation, we need to have the true position of scrofula more clearly defined than at present, its causes and symptoms more sharply drawn, and further statistical details, such as those of Neumann, recorded. That quite a share of children with eczema, among the poor, exhibit some of the features called scrofulous, that is pale, pasty skins, light hair, eyes, and complexion, enlarged glands, ophthalmia, otorrhœa, etc., is not to be questioned, but, that this state has any special effect in causing eczema, other than its depressing power, cannot now be proved. It is certain, however, that eczema and psoriasis exhibit somewhat different features when occurring in these subjects; the tendency to pus formation is evident in the secretion from eczema, and in psoriasis the scrofulous state is shown by a thickened and more yellowish condition of the scales.

Although less commonly thought of, there is probably more connection between what is called a scrofulous state and psoriasis than there is between the former and eczema. Gaskoin thinks that phthisis plays an important part in preparing the way for psoriasis, and I have been rather inclined to think the same; investigations are, however, needed here.

The results of this inquiry as to the local or constitutional nature of eczema and psoriasis may be summed up in the following propositions:—

I. Eczema and psoriasis are diseases *sui generis*, and are not to be confounded *in any way* with other states; as, the former with

dermatitis, and the latter with the eruptions of syphilis, scaly eczema, or leprosy.

II. Eczema and psoriasis cannot own a double, independent causation, or nature, at one time local, and at another constitutional; but, with other diseases, they may have a twofold cause, namely, a predisposing and an exciting.

III. Eczema and psoriasis in many of their features resemble the accepted constitutional diseases more than they do those recognized as local.

IV. The skin lesions of eczema and psoriasis, as also their microscopical characters, more nearly resemble those of the general and constitutional diseases affecting the skin, than they do those of purely local diseases.

V. Eczema is very properly likened to catarrh of the mucous membranes, but no argument as to its local nature can be drawn therefrom; it is very probable that some proportion of the mucous attacks called catarrh are eczema and psoriasis of this tissue.

VI. Both eczema and psoriasis resemble gout and rheumatism, in certain respects, and are dependent upon a somewhat similar, although as yet unknown, constitutional cause; much of the skin lesions, as ordinarily observed, must be looked upon as the *local results* of the diseases, removable by local means.

VII. There as yet exists no microscopical or physiological proof that eczema and psoriasis are the sole result of local cell disorder, either congenital, acquired, or due to perverted nerve action; although from our present knowledge of independent cell activity, and from the intimate connection between nerve elements and the cells composing the skin, it is highly probable that cell action and nerve influence are important factors in eczema and psoriasis.

VIII. Local causes play a very important part in the etiology of eczema; they are probably inoperative in psoriasis.

IX. Certain relationships between psoriasis and epithelioma have been claimed, which require much further investigation; at present they are not established, and are no proof of the local nature of psoriasis.

X. The clinical history of eczema and psoriasis furnishes much evidence of constitutional relations, mainly with states allied to gout and rheumatism; no direct causal connection has yet been demonstrated between the scrofulous state and eczema and psoriasis.

XI. Local treatment alone is often insufficient to remove the lesions of eczema and psoriasis, and cannot prevent or delay relapses; its success does not demonstrate the local nature of these affections.

XII. Constitutional treatment, alone and singly, can cure many cases of eczema and psoriasis, and prevent or delay relapses in a certain proportion of cases; by constitutional treatment is intended every agency not properly placed among local measures.

XIII. The total weight of evidence and argument is that eczema and psoriasis are both manifestations of constitutional disorders, and not local diseases of the skin.

In closing this paper, already far exceeding the limits designed, the writer would beg indulgence for its imperfections, of which he is fully aware; some of these have been necessitat[illegible] vastness of the subject and the small amount of space [illegible]ich to consider

them. Many points which had been elaborated much more, have been necessarily condensed or omitted, and many fields, an investigation of which would have further developed the subject, have been left entirely untouched; many have been barely alluded to, because of the scantiness of reliable data. It is to be hoped that the investigation will be pursued still further, for the etiology and pathology of these diseases may be considered as at the foundation of all dermatology, and the importance of some of the questions here raised can scarcely be overestimated.

The following are some of the points requiring further study: the mode of the formation of vesicles in eczema, and the way in which the exuded liquid reaches the surface; the state of the skin, histologically, very early in eczema and psoriasis, as also after the disappearance of the disease, and likewise of the skin of those subject to eczema and psoriasis in places where no disease has yet appeared; the nerve relations of these diseases clinically, and the state of the nerves microscopically; the condition of the bloodvessels very early and very late in these diseases, especially in regard to Wertheim's view of a capillary change being the cause of psoriasis; the resemblance between psoriasis and epithelioma, clinically and microscopically, as regards also the development of what are called psoriatic lesions of the mouth into epithelioma, and the true nature of the former and their relation to psoriasis, if any; also the possibility of the origin of psoriasis in hyperplasy of the rete downwards between the papillæ; the urinary relations of eczema and psoriasis, also their heredity, as relates to the diseases themselves, and also to other constitutional manifestations; the asserted connection between the eruptions of the exanthemata and eczema, especially in infants; the influence of dentition in the production of eczema; the effect of vaccination; and, finally, the relations of scrofula to eczema and psoriasis.

THE MANAGEMENT

OF

ECZEMA.

BY

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PREFACE.

The following Essay on The Management of Eczema is reprinted from the Transactions of the American Medical Association for 1874.

The object of presenting it in a separate form is that it may obtain a wider circulation than that afforded by the complete volume of the Transactions, and that those to whom the latter is not accessible may have the article if desired.

The aim of the following pages is to impress the fact that while Eczema is a disease *sui generis*, it is not to be treated abstractedly as such, but that rather the patient is to be restored to health; that Eczema depends upon many different conditions, and is consequently amenable to the most varied measures, so that its treatment is better styled The Management of Eczema. If he shall have assisted any in their attempts at mastering this protean malady, and shall have aided in removing its treatment from the rut of Fowler's solution and zinc ointment, in which carelessness has too often allowed it to run, the writer will be amply repaid for his labor.

The existence of the larger monographs on Eczema does not seem to preclude the necessity for a brief exposition of some of the principles involved in its management, and it will be a matter of satisfaction if any shall be hereby incited to the study of the able essays of Wilson, Anderson and Fox on Eczema.

L. D. B.

New York, *January*, 1875.

THE MANAGEMENT OF ECZEMA.

ECZEMA being a disease which attacks all classes and conditions of persons, from the cradle to the grave, and one which, moreover, assumes a multitude of forms, and appears under very varied circumstances, it is evident that its treatment must vary greatly in different cases, while each stage through which most instances of the eruption must pass requires an alteration in the plan pursued, which again demands ofttimes a further modification owing to personal idiosyncrasies in the patient. For these reasons we have chosen as our topic, "The Management of Eczema," leaving pathology, etiology, etc., to occupy a place second in practical importance to the great question, "How can we cure eczema in the quickest and best manner?" Inasmuch, however, as all sound treatment is based on, and should presuppose a knowledge of the pathological changes of the disease to be treated, let us very briefly first touch upon the nosological relations of eczema and the alterations of tissue connected therewith as visible to the naked eye and through the microscope.

Our study of the disease and its treatment will be much simplified if, with modern pathologists, we look upon eczema as but a dermatitis, an inflammation of the skin, entirely analogous to inflammation as presented elsewhere in the human system. Eczema, however, differs from all other dermal inflammations, as erythema, erysipelas, herpes, acne, psoriasis, prurigo, and the like, in its exudative feature, in which it stands alone and resembles the catarrhal affections of the mucous membranes, whence certain writers call the disease a catarrhal inflammation of the skin, a comparison borne out by its clinical history as well as its pathological characters, and one which I wish to bring out very fully in our consideration of the subject before us. The stages of heat and dryness, subsequent tumefaction, and later free discharge

occurring in an ordinary mucous catarrh, all find their like in acute eczema, while the constant exudation and irritation of chronic mucous inflammation answer to certain chronic eczematous states.

The pathological conditions in eczema, as observed by Neumann, Biesiadecki, Rindfleish, and others, are as follows: When artificial dermatitis is produced, as by rubbing croton oil on the ear of a rabbit, a rhythmical contraction and relaxation of the capillaries is seen to take place, wherein the vessels at one moment appear to be empty of blood, and at the next greatly distended, which alternations continue until stasis occurs and the part, which before was transparent, becomes opaque, swollen, and hot. This congestion, thus occurring, relieves itself by an exudation of serum into and between the cells surrounding the bloodvessels, accompanied by an active proliferation of the cell elements of the skin, while the elongated connective-tissue cells, which Biesiadecki has shown to exist more or less abundantly between the cylindrical and polygonal cells of the *rete mucosum*, become swollen and seek to discharge their contents externally. If the epidermal layer is unbroken, this fluid, on reaching the surface, is retained in the form of vesicles, causing more or less œdema of the partsmean while; but if there is a solution of continuity, the discharge finds exit either through minute orifices which represent the natural pores or openings of the skin, where it is pierced by the sweat glands and hair follicles, the epidermal layer being thinnest there, or the fluid exudes from cracks in the epidermis, which may reach down even to the papillary layer.

In an eczema which has existed some time, chronic eczema, we have another element superadded, an element which is the result of the active process, and which now becomes the main object of our treatment, namely, the infiltration of the *rete mucosum* and papillary layer with new cells. Whether these cells result from a proliferation of connective-tissue or other cells, or are transuded white blood corpuscles, it does not come within the province of our paper to discuss. This infiltration, in certain instances, may extend through the whole structure of the derma and affect even the *panniculus adiposus* or loose fatty tissue beneath, whereby the well-known thickening of the skin results to such extent, at times, as to cause it to appear firmly attached to the subjacent parts. This thickening is seen, microscopically, in the enlarged papillæ, which become sometimes large enough to be recognized by the naked eye; also in the new cell growth around the capillaries and

in the walls between the single fat cells, and is recognized, clinically, by the increased thickness of a fold of diseased skin when pinched between the fingers, though sometimes the hyperplasia is so great that it is impossible thus to raise a fold of it. *While this thickening remains, the eczema is not cured, but will pretty certainly recur when treatment is suspended.*

The practical bearing which this pathological study has on the management of eczema is this: in the acute stage the disease is simply a catarrh of the skin, namely, a congestive condition of the cutaneous capillaries, resulting in an exudation of serous fluid, which seeks exit and must obtain it, and which manifests itself externally in vesicles, exudation, crusting or scaling, whereas in the chronic stage we have rather to do with the products of inflammation whose removal becomes our main object of endeavor. Here there is the first great division of eczema, which Hebra was one of the foremost to clearly mark out and insist on, and which is of the highest value in a scientific and satisfactory treatment of the disease. But although thus divisible into acute and chronic, there is no definite boundary line between the forms of eczema, nor is it possible to say exactly when the acute affection ceases and the chronic begins, and here it is that the *management* of eczema comes in, to determine just when soothing remedies are required, and when stimulating applications may be used with advantage, and it will be our task to endeavor to make this more clear.

Now while we have alluded to eczema as a dermatitis or inflammation of the skin, we must not be understood to signify that every dermatitis is an eczema. For besides the specific, well-defined inflammations of the skin, erythema, erysipelas, herpes, acne, psoriasis, prurigo, etc., we have traumatic dermatitis, also that arising from the action of heat and cold, likewise from animal and vegetable poisons of various kinds, giving rise to malignant pustule, to the peculiar eruptions following the use of arnica, those from the noxious influence of the rhus toxicodendron, from powered podophyllin, croton oil, savin, and tartar emetic, or, more unusual instances, where an aniline dye in cloth or irritating soap have induced superficial inflammations. These eruptions are not eczema, although often wrongly so called; nor is there any tendency for them to develop into eczema except in certain instances; for, the cause ceasing to act, the parts soon regain their normal state after the results of the injury have been removed by absorption or

exfoliation, no catarrhal exudation or cellular infiltration accompanying or following.

But, as before stated, this is not the case always, for sometimes, starting from a most insignificant beginning, we will have an eczema manifest itself which baffles our best skill for a long period, while the same irritation in another person, or in the same individual at another time, causes but a transient dermal inflammation. As to the reason of this difference we can only say that there is some special influence, still unknown, whether inherent in deranged cell action, a congenital defect of development, or due to a "perverted innervation," or whether it is the exhibition of a blood crasis or diathesis, as the French school maintain, it is impossible as yet to state. The arguments for the diathetic view are very strong, as, the appearances of the skin in syphilis and the exanthemata, the alternation of certain cutaneous lesions with manifestations of gout, rheumatism, bronchitis, etc., where the blood and secretions are known to be disordered, the irritating nature of the discharges from the nose in some cases of catarrh, and the like, whereas the purely local pathology of deranged cell action appears to us to be supported only by the effects observed to follow external irritating applications. Now the whole force of the argument, derived from the production of artificial eczema, is destroyed by the fact before stated that the inflammation of the skin produced by croton oil, antimony, or, indeed, any irritating topical agency will, in a large majority of cases, tend to disappear as soon as the exciting causes are removed, while in the remaining minority of instances the local excitement serves as the starting point of a true eczema, that is, a catarrhal condition of the skin with little if any inclination to spontaneous recovery, and that only after running a certain course, and leaving behind it the alterations observed in chronic eczematous skin.

This difference, we hold, depends upon blood conditions as invariably and certainly as the serous and fibrous inflammations of gout and rheumatism depend upon the circulation of imperfectly elaborated blood, or the inflammatory and other conditions of the heart, lungs, and brain result from the presence of urea in the blood of patients suffering from kidney disease. Again, as arthritic, pulmonary, or cerebral symptoms appear to be the culmination of a blood process which we know as gout and rheumatism, so true eczema is directly dependent upon somewhat similar although as yet but little defined, blood change, while the local

alterations remaining after an acute attack but correspond to the gouty concretions on and in the synovial membranes and the rheumatic thickening left around joints long inflamed; and further, as rheumatic and gouty symptoms are in a measure self-limited acute attacks, after which the health appears excellent, better perhaps than before, so eczema, the catarrhal affection, is in a measure a self-limited acute manifestation of systemic disorder, with the same tendency to recur again and again, the health in the mean time being perfect, while the product of the disease, the cell infiltration, remains.

The success of local treatment militates nothing against this view, for the acute form is now widely recognized as running a definite course through certain stages, which can as seldom be aborted as can gout or rheumatism, and which can only be modified and relieved by soothing treatment, while the tissue changes left afterwards, which in their turn keep up congestion and serous exudation, are local affairs, and therefore amenable to powerful local stimulants and such agents as induce absorption.

What the local pathology is which determines that at one time one portion of the body shall be attacked and at another time another, cannot be determined in every instance, although very frequently, local causes are found to exist. That there is engrafted on a part that has been once affected a tendency to the recurrence of the same form of alteration, resulting in eczema, seems probable, inasmuch as we observe the same part again and again affected; and also from what we know of the repetition of other forms of disease time and again in other organs and tissues. Were it granted that local treatment really cured the disease, eczema, it would still be explainable on the ground that the topical measures overcame the particular local debility of tissue, or counteracted the injurious effect of the agency which caused the development of the constitutional inflammatory process at that particular spot, by restoring tone to the weakened cells, bloodvessels, or nerves, whichever future pathology shall demonstrate to be at fault in eczema.

With this glance at the histological pathology and nature of eczema, let us turn to consider a little more closely their bearing upon the management of the disease. Acute artificial eczema, such as results from heat, mechanical or chemical irritants, water, sugar, lime, flour, and the like, requires but a removal of the cause, protection from these and other injurious agencies, and the requi-

site time for the engorged vessels to discharge their serum, this to make its way to the surface, and the damage done to the outer layers to be replaced by a natural reproduction of the epidermis—a most simple treatment. A very striking example of this is seen in scabies. Were it possible to remove with a needle each acarus and its eggs, the itching would cease, and in from three to ten days most patients would be well—remembering, of course, the minority in whom the artificial irritation once started might be provocative of true eczematous disease. As it is, we cure the itch by applying some agent which destroys the animal and its larvæ in the burrows, as balsam of Peru, storax, sulphur, carbolic acid, and the like, and the eczematous papules, vesicles, and pustules which compose the eruption soon disappear, if perchance our applications have not excited further trouble. Take, again, the washerwoman's eczema of the hands; restrain her from immersing them in water, and in many instances they get well of themselves; kill the pediculi in phthiriasis capitis, and the accompanying eczema soon vanishes; croton oil and tartar emetic eruptions require but the suspension of the irritating applications, and a few days suffice to restore healthy cuticle; eczema of the hands and face from sunburn is, in most cases, a very temporary affair requiring no treatment. But still all these cases demand *management;* it is necessary the wrong thing should *not* be done, that irritating agencies should be kept away. Take, now, any one of the instances cited, place coarse flannel next an eruption following the friction with croton oil or a blistered surface, and the time of healing is prolonged, it may be indefinitely; or worse, apply a strong mercurial or resin ointment or even a harmless salve which has become rancid, and what results? The simple, superficial dermatitis is increased and prolonged, as a consequence cell infiltration of deeper parts must follow the protracted capillary congestion, and you have dermatitis of greater intensity and extent—call it eczema if you like, it resembles it closely—and that spot cannot heal until the new deposit of unneeded cells and serum is absorbed.

Now, as there are great diversities of temperaments, constitutions, etc., so we find many skins so delicate that very slight external impressions suffice to produce great changes; and two elements almost constantly present are found to have very great influence in prolonging and aggravating most cases of eczema, artificial or constitutional, we refer to atmospheric air and water. Another very important element in the production and continua-

tion of eczema, and one which must be removed at all hazards, although often it seems impossible, is scratching, for the diseased skin can never fully recover while repeatedly irritated in this way.

Our first care, therefore, when brought to face an eczema, is to remove irritating agents, or, if they are employed therapeutically, to so limit and control their action that only the desired stimulation shall be afforded. To exclude air and water and to secure a bland, non-irritating covering for the inflamed surface, we are in the habit of using four classes of applications, namely, dusting powders, medicated lotions, ointments, and flexible collodion (I have not mentioned poultices, for I have rarely if ever ordered them for eczema, and then only to remove crusts, and I have moreover seen untold injury follow their misuse by others). If we can fulfil other indications while we make these mild coverings, we of course gain, and this we may attempt to do by combining some of the sedative and gently stimulant remedies with our dressings. Thus in powders we add a trifle of morphine or camphor to allay the itching, a small portion of oxide of zinc or bismuth as a local stimulant, with considerable powdered starch or lycopodium dust. These must be very finely powdered, and here let me emphasize as forcibly as possible the absolute necessity of having any solid substance which is to come into contact with the inflamed skin, whether in powder, lotion, or ointment, reduced to as nearly an impalpable powder as possible. Very much harm is constantly done to irritable skins by the coarse, gritty substances incorporated into various outward applications, and that through a culpable carelessness on the part of druggists. To have success in treating skin cases it is indispensable to see to this personally; and, lest a better occasion should not offer, I wish to add a word with reference to another pharmaceutical aspect of the management of eczema, which I have before hinted at, and that is, the very irritating nature of ointments which have become at all rancid, for I firmly believe that a large share of our want of success in handling these cases is due to some failure in the ultimate employment of the means suggested, rather than to any fault in the advice given, as is shown in the very great success attending local treatment in skin hospitals, where not only the patients but also the drugs and their immediate application are directly under the eye of the physician. To this end, I generally insist that my prescriptions

shall be taken to one of three or four druggists whom I constantly watch.

To return: *lotions* are very well suited to the acute stage of eczema, and of these, among the best are such as on evaporating leave some finely divided powder on the part, and the one I most commonly use resembles those employed by the English, and consists of from ʒij to ʒiv of finely levigated calamine, a somewhat less quantity of oxide of zinc, two drachms of glycerin, one of the alkaline solution of tar (to be described further on), and four ounces rose-water. In the erythematous stage, when the skin is unbroken, we may use dilute hydrocyanic acid with bismuth, and the like. I will not stop to enumerate the washes applicable to different cases in which the text-books abound, as we are considering rather the principles of the management of eczema, and a few of the remedies I have found most serviceable are introduced only by way of illustration. I will merely add that it is better always to use distilled water in forming lotions, or the rose, cherry-laurel, or orange-flower water, which, in addition to being distilled, possess an agreeable odor.

When exudation has more or less ceased, and the skin is hot and irritable, liquid preparations are less agreeable, and *ointments* are called for. These act in many instances quite as much by excluding the air and preventing evaporation as by virtue of any medications they may contain. The simplest of these greasy applications is cod-liver oil, which administered internally and kept continuously on the skin suffice to cure many cases of acute or subacute eczema, especially where there is more or less marked tendency to pus formation. Almost any kind of fatty matter which is without irritating properties serves to form the artificial covering required for the abraded surfaces of eczema. I have employed quite largely simple mutton suet mingled with a greater or less quantity of fresh lard so as to render it soft and pliable, anointing the surface therewith after the use of some wash, as the alkaline tar diluted considerably.

The most widely-known and used ointment is undoubtedly that of oxide of zinc, a drachm to the ounce of lard, or modified, as Wilson advises, by adding benzoin to prevent rancidity. This latter end may be accomplished equally well and far more agreeably by employing the rose ointment in place of the lard and benzoin, and I have often found the zinc ointment thus made very soothing, when the benzoated preparation had proved highly irri-

tating; cucumber ointment forms a very pleasant and bland excipient as well; also the glycerin and starch combination recently introduced into our Pharmacopœia. Hebra's famous diachylon ointment has not proved as serviceable in our hands as we had hoped to find it after witnessing the excellent results obtained with it at Vienna; it must be reckoned, however, as among our best local applications for affording a non-irritating covering to the inflamed and exuding skin. Finally, the flexible collodion painted over small spots of dry subacute eczema answers very well to afford a covering impervious to air and water, beneath which healing will often take place rapidly and satisfactorily. The application is painful if the surface is at all raw or cracked, and if there is any exudation it very quickly forces off the coating.

Quite other is the local treatment of *chronic eczema*, where, as before stated, we have the products of disease and a local, morbid cell-action to deal with, rather than the disease itself. Hebra, observing that when there is free secretion from the surface the itching of eczema is very much diminished, makes a bold dash in the way of treatment, and applies such agents and in such a manner as to remove at once the imperfectly formed epithelial layers (which would be thrown off sooner or later), thus giving vent to the pent-up exudation, and stimulating the skin so violently as really to induce acute disease. For this purpose he employs energetic frictions with soft potassa soap by means of stiff brushes upon eczematous legs to such a point as to cause the foam produced with water to be red with blood, as I have repeatedly witnessed; and upon the raw surface thus occasioned, the diachylon ointment is laid, spread upon linen, and the process is repeated at the end of twenty-four hours. In certain thickened eczemas, especially of the scrotum, Hebra also applies a poultice of the same green soap, with the effect of completely dissolving and removing the outer layers of the skin and producing free exudation from its surface. He further employs very strong solutions of caustic potassa, even up to equal parts with water by weight, which are well rubbed on infiltrated patches, certainly to the great relief of the itching and removal of the thickening.

Now my experience is, that American skins will not stand these very harsh applications; nor will our patients submit to such painful treatment, requiring ofttimes confinement to the bed, and generally a cessation of occupation for diseases which affect their comfort and pleasure only, and do not endanger life; and, finally, I find

that the same ends may be accomplished by other means. These severe remedies, moreover, cannot be employed with impunity, even by Hebra himself. I recall perfectly a case occurring in the out-door clinic, where a young girl about 18 years of age applied for the treatment of a small patch of subacute eczema on the back of one of her hands. Hebra had just been manipulating another patient with a very strong solution of potassa, and he rubbed the brush in his hand over the patch, intimating, as she left, that it might cause trouble if it did not cure. In a few days the patient presented herself for admission to the hospital with the whole hand swollen and painful; the entire arm was soon involved in a very severe suppurative eczema, which spread somewhat on to the body and was accompanied with a very high fever, so that one day her life was in danger. She was in the hospital some time, and all this from the injudicious use of caustics, and that in the hands of Hebra. Surely others have need of caution.

Great thanks, however, are due to the German School for the development of local pathology and the local treatment of many skin diseases, and especially, in our present connection, for the introduction of the local use of potassa and tarry preparations for relieving itching and reducing thickening of the skin, which, when judiciously employed, are of great service to the dermatologist. Hebra's justly famous "compound tincture of green soap," containing equal parts of sapo-viridis, tar or oil of cade, and alcohol, is very valuable and has long been employed in the more chronic forms of eczema. But the alcohol is an insurmountable obstacle to its use on many skins, and when diluted with water it forms only an emulsion, depositing on standing, and does not, therefore, present the component parts in a truly soluble state, and furthermore, it is not readily removed from the skin and clothing.

For these reasons we have striven to introduce into general notice the "*liquor picis alkalinus*," which we presented to the profession some time ago at a meeting of the New York Dermatological Society, and subsequently published in the *Archives of Scientific and Practical Medicine* for February of last year, and which we have employed daily since that time with increasing confidence. In this the tar is made to combine with water by means of caustic potassa, after the formula:—

℞.—Picis liquidæ, f℥ij.
Potassæ causticæ, ℥j.
Aquæ destillatæ, f℥v.—M.

Ft. "liquor picis alkalinus." To be used diluted.

The stick potassa is to be dissolved in the water and gradually added to the tar with rubbing in a mortar.

Few remedies that we know of possess greater value in relieving itching and diminishing thickening of the skin than the above, and its readiness of dilution renders it capable of being used in varying strength in almost all the varieties of eczema. Thus in acute forms, diluted one part to twelve or sixteen or more of water, it may be kept applied constantly during the day, or, sponged lightly over the parts affected which are then to be quickly covered with some mild salve, it serves the purpose admirably of removing the secretions, dead epithelial matter, and old ointment, relieving greatly the burning and itching, and promoting the absorption of any adventitious cell elements which may have formed. In less acute cases, where there is scaling, as in dry red eczema of the head, face, and hands, a stronger solution, say one part in five or ten of water, rubbed in and followed by tannin ointment ℥j ad ℥j, often removes the disease very quickly. When describing the effect of external treatment as so satisfactory, we imply that either the lesion is either a wholly local affair, a dermatitis rather than a true eczema, or that constitutional treatment, to be mentioned hereafter, is assisting, or that the catarrhal disease, eczema, is past, and we have only its result, the cell infiltration or the abnormal cell-tendency, which tends to perpetuate and spread the disease after the same pathological law which is observed in neoplastic formations.

When more stimulating measures are required, the same alkaline tar may be used in greater strength, thus, mingled with equal parts of water or undiluted, and I have even added double the amount of potassa, causing it to be greatly in excess, but this only in very rare instances. It is well to remember that in the formula given, the caustic potassa in an ounce is twice the amount found in the officinal liquor potassæ, and I would advise it to be diluted considerably when first employed. I have, however, known long-standing moist eczema of the leg to be cured by a very few energetic frictions of the full strength of the above solution—such heroic measures I seldom attempt.

Ofttimes we will succeed better by combining this alkaline tar directly with an ointment, say ℥j vel ℥ij ad ℥j, directing it to be

rubbed into the affected part quite firmly; this may be rendered still more efficient by the addition of from one to three drachms of the officinal citrine, white precipitate, red oxide of mercury, sulphur, or other active ointment, to the ounce.

We must not omit to mention that very old infiltrations yield only to still more severe means, as the application of blisters, the cantharidal collodion or acetum cantharidis, or very strong solutions of nitrate of silver or caustic potassa.

Between these extremes of real acute and thoroughly chronic eczema there are a host of varieties and forms, each case perhaps of fifty, appearing in succession, presenting features quite unlike the others, and requiring some modification of the plans above suggested. Having described, then, the limits of local treatment in both directions of severity and leniency, we will enter upon the subject of internal medication and hygienic management, mentioning only that baths are often of great service in all the forms of eczema; but as pure water is irritating to most eczematous skins, they must be modified by the addition of alkalies, as carbonate of potassa and soda, with starch or glycerin.

I have described the local measures first, not because I regard them of greatest importance, but for exactly the contrary reason, namely, because I would impress the fact that their effects are but local and in a great measure temporary, whereas true eczema is a constitutional affair of which the appearances on the skin are but the outcroppings; and while we must be able to handle well these topical remedies to insure present relief, to assist internal medicine in breaking up the local dyscrasia, and to prevent the patient and friends from applying what will be actually injurious, it is absolutely necessary to institute other measures addressed to the system at large if we would be really successful in managing eczema and checking or modifying its recurrence.

When the internal treatment of eczema is spoken of, arsenic at once occurs to most minds, and to read what some have written in its favor one is led to form very high estimates of the all-curative power of this drug. But daily experience proves that arsenic, although playing an important part at times in cutaneous therapeusis, is not a specific for eczema, nor indeed can we reasonably look for any one remedy to cure so polymorphous a disease. The analogy between the use of arsenic in this affection and mercury and iodide of potassium for the ever varying syphilides does not

hold, for the latter are the result of a specific external poison, and, moreover, clinical experience is for the one and against the other.

The constitutional treatment of eczema covers a wide field, and naturally divides itself under three heads: Dietetic, Hygienic, and Medicinal, each and all very important.

1st. *Dietetic.* Not unfrequently, infantile eczema is caused and kept up by improper indulgences, or by a poor or improper condition of the milk, or by too frequent or irregular feeding; and the addition of a little cream or perhaps extract of meat, together with the abstaining from farinaceous compounds usually given, or the obtaining of suitable, nourishing milk and regulating its administration, will sometimes be quite sufficient to remove the disease. The same is true of adults; dyspepsia, caused by wrong eating, drinking, and living, aggravates all skin diseases, and its removal alone renders many cases of eczema curable. In acute or subacute eczema, covering a large surface, a hearty meat diet increases the trouble, while stimulants, which I have repeatedly found patients taking, but add fuel to the flame.

2d. *Hygienic* measures are essential; fresh air, exercise, and bathing, together with the avoidance of fatigue, will prevent the recurrence of many cases of eczema, and in certain instances will assist in its cure.

3d. *Medicines* are called for in a large share of the cases of eczema, because there is some constitutional derangement in a great majority of the patients with this disease; for, except in the case of purely local dermatitis, resulting from direct violence, chemical, mechanical, etc., we may be sure that disease cannot fix itself upon a perfectly healthy organism, but its presence there is an evidence of debility.

Internal medication, then, will be demanded to meet several different requirements, and may be spoken of under as many different heads; thus, Cathartics, Diuretics, Alkalies, Tonics, and Sedatives. *Cathartics* are very serviceable on entering a course of treatment, in clearing the *primæ viæ*, and need to be repeated from time to time; their abuse, however, particularly of those at all drastic or exhausting, directly increases the cutaneous irritation. In infants, calomel or gray powder is frequently required, especially when pulmonary or intestinal troubles threaten. *Diuretics* are positively demanded in a goodly proportion of cases, because the kidney action is very frequently found to be defective and extra work is thrown upon the skin, or the cutaneous capillaries are

irritated by the circulation through them of effete products. With diuretics we will speak also of *alkalies*, for most of those administered have more or less action upon the kidneys, and their necessity is indicated more especially by a hyper-acidity of the urine with crystalline deposits.

The recognition of this acidity and its proper management we consider of the utmost importance in the treatment of eczema. Our observations on the urine of eczematous patients, which have been quite extended, have more than confirmed all that others have said on this subject, and we have found that secretion more acid than normal in almost every one thus affected who was not under the influence of medicine, while free uric acid is not at all uncommon, together with the amorphous urates. Many of the patients have an acid dyspepsia; in infants the substances ejected from the stomach are intensely acid, while the fecal evacuations, as well as the urine, scald and irritate the parts with which they come in contact. Rational management suggests counteracting this acidity, and this in my hands has furnished the best results. This may be accomplished in three ways—*first*, by directly removing an amount of it, either by emptying the stomach at the time when it contains the greatest amount of acid, that is, during digestion (the almost universal vomiting of infants with eczema being probably an effort of nature in this direction), or by increasing the activity of the natural emunctories, the skin, kidneys, and bowels, whereby acid is thrown off, its place in the economy being supplied from food and drink with ingredients containing less acid principle; *second*, by checking the supply generated, by cutting off such articles of diet as are prone to undergo acid fermentation, and also by administering such remedies as tend to promote oxidation and so carry through the systemic processes to their normal end, a failure in which, or sub-oxidation as it is called, results in acid formation; and, *thirdly*, by giving such agents as chemically neutralize the acid present. These ends are attained oftentimes medically by the use of some of the mineral waters, especially when taken at the springs, and first among those artificially prepared we would place Kissingen water, taken repeatedly a pint before breakfast. In infants we administer lime, Vichy, or magnesia water to the same end, while acetate, bitartrate, and citrate of potassa, sulphate and carbonate of magnesia, carbonate and solution of acetate of ammonia, sweet spirits of nitre, together with liquor potassæ, and bi-

carbonate of soda in combination with rhubarb, are precious remedies to those who have tried their value.

Of no less service, when rightly used, are *tonics*, and the list from which we make daily selections is not large: quinine, strychnine, iron—of which the ammonio-citrate, sulphate, pyrophosphate, tincture of the chloride, syrup of the iodide, and sweet wine of iron are the most common—arsenic, the mineral acids, the vegetable bitters, as cinchona, gentian, columbo, quassia, and colchicum for the gouty, and cod-liver oil. It will be seen that arsenic occupies but a single place in this list, and it is to this fact that I would direct special attention. I feel confident that others who see much of skin diseases will bear me out in the assertion that arsenic has been very much overrated in its power over cutaneous affections, and I am free to confess that I prescribe it but seldom and rarely alone, for the reason that most of the patients have been through a course of the drug before being referred to me. That it greatly assists at times I cannot deny, and I believe it gives permanency to the cure in some cases if continued long enough. I can discover but two ways in which it can act, and both of them through the agency of the nervous system, as we must believe from its beneficial effect in nervous disorders and malaria. First, then, arsenic acts as a nerve tonic in the highest sense of the term by giving tone to the nerves which preside over the elaboration of the blood, thereby regulating and controlling all morbid changes, as hyperacidity, etc.; and, second, it assists in removing infiltrated cells and serum by a direct stimulation to the capillary circulation, causing their absorption, which quickening of capillary action is seen in psoriasis and lupus, where the first sign of improvement is reddening of the base.

One agent of very great value in many cases of eczema, and the use of which experience confidently recommends, in selected cases, is cod-liver oil. Although Hebra expressly states "that its internal employment is without any effect upon eczematous disease," many will agree with me unquestionably that its effect is magical, and that as a single remedy it approaches nearer to being a specific for the proper cases of eczema than any other we possess. Tilbury Fox has called special attention to the variety where the pus-formation of the impetiginous form is far greater than can be accounted for by the intensity of the inflammation present; these cases often yield to it alone. Also where there is the thin, transparent skin and light hair of the scrofulous, or the thick, doughy,

etc., and this state, moreover, is closely allied to gout, rheumatism, and scrofula.

V. Debility, pure and simple, does not cause eczema, but may, by its existence, prevent either the recuperative action of nature or the beneficial effect of remedies.

VI. Eczema being an acute disease, running a definite course, our treatment must consist principally in avoiding irritating elements, correcting systemic errors, debility, acidity, etc., favoring the action of the emunctories, and locally making such applications as soothe and restore tone to an irritated and inflamed integument.

VII. The products of eczema, the thickening and consequent scaling and itching, are removed by stimulating applications, and by such pure tonics as act directly on the nerves, causing absorption through the capillaries, as quinine, iron, arsenic, strychnine, and the like.

VIII. Arsenic and zinc ointment, while serviceable in many instances, are so far from being specifics for eczema that their use is injurious in many cases, while almost always other remedies will either suffice alone or greatly assist their action.

ON THE MANAGEMENT

OF

INFANTILE ECZEMA,

BY

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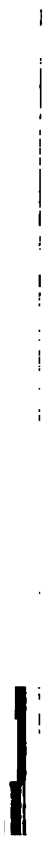

MANAGEMENT OF INFANTILE ECZEMA.

"To be a successful practitioner in the treatment of eczema, a medical man must be an accomplished physician; to manage the local treatment with success, he must also be an able surgeon."—*Wilson.*

By infantile eczema is here understood cases of this disease occurring in children of five years old or under, although writers have not generally been very definite in fixing upon the time of life at which it ceases to be properly so called. There are reasons, however, for classing all cases of eczema occurring during the first five years of age together, and for considering them under one designation, whereas no objections can be reasonably raised to such a procedure.

The periods of life are conveniently divided into decades and half decades, and if we look at the statistics of a large number of cases of eczema, we shall find that the first decade of life presents a very much larger proportion of cases than any other; by far the larger share of cases in this decade will be found in children of five years of age or under. Thus, of two thousand and thirty-three cases of eczema, five hundred and twenty-four came within the definition of infantile eczema, or 25.7 per cent.; the per centage in private practice being sixteen, and the dispensary average being thirty per cent. This proportion would be increased very largely did not a certain number of patients, with infantile eczema, find their way to the children's department of the dispensary, while, of course, multitudes of cases are never treated at all, owing to the impression so prevalent, both among the laity and the profession, that it is either dangerous or useless to treat this disorder. The layman fears lest some harm may come from the disease being "driven in," which fear the physician sometimes fosters, from ignorance, or from carelessness and unwillingness to cope with the case. The little sufferer from eczema, therefore, is left to bear his trials unaided, with the hope that with each change in its physio-

logical conditions the disease will pass away. Thus, the eruption being called "milk crust" during nursing, the assurance is given that it will cease when it cuts its teeth. When this stage is arrived at, and the eruption is aggravated with each accession of a tooth, the eruption takes the name of "tooth rash," which will cease when certain teeth are through. These come, and yet the disease persists, little being done to check or modify it, and so on. I have seen multitudes of cases which had lasted one, two, three, four, or more years, and in one instance, a characteristic moist eczema, a veritable milk crust, which had remained on the head from earliest infancy to twelve years of age; and in another case, a gentleman of thirty-one years of age, had had the same on the legs since the first year of life.

Now we by no means deny that the eczema of infancy is very intimately associated with the milk and with the irruption of the teeth, but we do start with the proposition that it is not necessarily a result of either the partaking of milk or of the formation and breaking through of the teeth, but that it always and invariably signifies an error of some kind, which medical thought should avert; and, that it is, like any other aberration from health, a condition of affairs which medical skill should remove.

Infantile eczema presents certain features different from the phases of the disease which are seen in adult life, and these features, which are dependent upon the structure and quality of the skin of children, are such as almost to render it another disease, and to call for quite different management, at least in most cases, from the same eruption in adults.

The expression, "The *management* of infantile eczema," was chosen as a title instead of "The *treatment* of infantile eczema," because it was wished to impress the fact that the disease is of such protean shape, and the etiological facts so varied, that it is difficult to speak of the measures to be employed in its cure as a treatment, inasmuch as they are better considered as management of the patient in all the relations of life, than as routine treatment to be given simply because the eruption eczema is present.

We will, therefore, begin with the etiology of the disease, as we understand it; and in considering this, will rather state practical facts from experience than cite authorities.

Infantile eczema is by no means an hereditary affection, that is, in but a small proportion of the cases are the parents, one or both,

the subjects of the same: and conversely, parents may have eczema, while their infants escape. It is true, however, that many parents with a strong eczema tendency often have children thus affected, although they themselves need not have the eruption at any particular time when the child happens to have it. It need hardly be stated that eczema is never acquired by contagion, although the laity will often thus believe.

The fact cannot be denied that a majority of infants with eczema appear to be in perfect health, indeed may be *apparently* healthier than the others in the family who have not the eruption; they are not infrequently of a ruddy color, have good appetites, with regular action of the bowels, and parents are with difficulty convinced that there is some error beyond the simple skin lesion. And yet I feel confident in affirming that exceedingly careful medical investigation will always discover something to be corrected besides the disorder of the skin.

In nursing-infants with eczema, I very commonly find that the mother is in the habit of consuming large quantities of tea, or perhaps beer or ale, or takes wine pretty freely, or, perhaps she is taking only chocolate or milk, and these disagree with her, causing dyspepsia; or she is constipated, or her urine shows disorder, indicative of derangement of digestion or assimilation. Now if these elements exist, if the mother's secretions, as from the bowels, kidneys, skin, liver, etc., are not healthy, certainly the secretion of milk is not healthy, and thus it can provoke disorder in the child. In the case of nursing-infants with eczema, therefore, my attention is always turned first to the mother, and I believe I can say that in an enormously large percentage of cases, if not always, I find errors of assimilation and disassimilation in the mother, which must first be corrected before we can hope for or expect great and permanent benefit to the child. It must never be forgotten that a patient may have extensive oxaluria as almost the sole indication of mal-assimilation, other than a general tired feeling, etc. I never allow mothers nursing eczematous children to take any fermented liquors, and generally cut off the quantity of tea drank, especially if it is used in excess: milk I conceive to be the best food upon which the mother may form milk, and seldom do I fail to have it used freely. If it is not well borne at first, the habit of taking it can be acquired: frequently it is necessary to add a little alkali, and I commonly use the liquor potassæ, ten to fifteen drops to the tumbler full of milk.

In not a few instances the milk furnished by the mother is absolutely too weak to sustain the child properly, and we must either provide other nourishment or improve the mother's health, or both. I have very frequent occasion to prescribe for the mother, giving tonics, alkalies. etc., and it must be borne in mind that the mother may require oily matter, as codliver oil, as well as the child.

Where the nutriment from the mother is weak we may supplement it with codliver oil, which I continually give, even to very small children with eczema: or, where it can be had, I believe that cream should certainly be given to the infant with eczema whose nurse-mother is in poor health and furnishes milk insufficiently rich. Or, again, oil may be administered by inunction, either cod-liver, linseed or sweet almond oil being used; for eczema is decidedly a disease of mal-nutrition, in every subject from the youngest to the oldest.

I see many infants with eczema who are being fed very erroneously, either in conjunction with nursing or in lieu thereof, and a change in diet often assists the management of the case wonderfully. Milk I believe to be the proper nutriment for children under one year of age, and yet very few of those which I see are thus fed. Most of them are taking too large quantities of starchy food, corn starch, farina, etc., and in many instances far too much sugar is given with the food. These elements all require attention in the management of infantile eczema, if we really desire to cure the patient, that is to effect a permanent removal of the disease.

I need hardly speak of the grosser errors of diet sometimes observed in these patients, other than to mention that I constantly find among the poorer classes, children of the most tender years, or even months, who are allowed to partake of anything or everything used by adults which they may crave, and that it is not at all uncommon to find children with eczema, even less than a year old, of whom the parents say with perfect naiveté, that they are "very fond of tea." It would seem as though such evils could not prevail among the better classes, but we have only to remember that the nurses to whom so much is often committed, all come from these lower, ignorant classes, and unless they are watched and directed otherwise, they will practice just as they have been brought up at home. Moreover, if time permitted, I could give instances where very intelligent persons were feeding patients with infantile eczema in a most outrageous and inexcusable manner.

Constipation is a very frequent accompaniment of infantile eczema, though the reverse state, diarrhœa, is occasionally met with; either and both are evidences of mal-assimilation. For the constipation of children I use lactopeptine, in doses sufficient to produce the desired effect. It is to be given directly after eating, and may be repeated once or more after each meal, if necessary. It is very conveniently administered in suspension, as in orange-flower water, though children often rather like to have it dry on the tongue. In the beginning of a case, nothing that I know of suits so well to unload the bowels, and make an impression on the eczema, as Wilson's treatment, of calomel, in doses suited to the age and condition of the child. Under a year I generally give six and a half centigrams (one grain), well rubbed up with sugar, or a little bi-carbonate of soda, the dose being increased by about three centigrams (half a grain) for each additional year of life. This powder may be repeated, if necessary, every other day, and I prefer to have it given in the morning, rather than at night, that the effects may be better watched, and that any uneasiness occasioned thereby may not disturb the night's rest. Often the powders need be given but once or twice a week, or even as occasion demands. Any irregularity of the bowels, and especially any tendency to pulmonary congestion, should at once be treated by one of the powders.

Where the tendency to constipation is not overcome by these means, the food must be changed, and even in very small infants, I have oat-meal or cracked wheat added to the food, in the way of a pulp, made by rubbing thoroughly boiled meal through a fine sieve. Other modifications of diet may of course be necessary, but cannot be entered into here.

Sometimes in the desire to avoid starchy foods, animal food will be given in much too large proportion, and I have seen very young children stuffed with beef-tea, beef-juice, or extract of beef, to an alarming extent. In one instance I believe the child died from this, together with brandy, which was freely given. In the more acute forms the diet should be light and unstimulating, and the organs of digestion assisted, as will be mentioned later; in every case there is more or less inactivity of the processes of assimilation and disintegration.

Coming to the medical treatment of infantile eczema, we find that remedies certainly have a very great influence in the disease.

Calomel has already been mentioned, and if rightly used, it is capable of very much good. Young children also bear alkalies very well, and will improve in general health as well, under them. In nursing-infants I generally give the mother acetate of potassa one gram (fifteen grains) or so, three times daily after eating, with nux vomica and a bitter infusion. I do not know if it passes through the milk in any way, but it certainly benefits the child very much. Lime water is of good service, though I do not use it nearly as much as many. I am very fond of giving the child Vichy water with the milk, using it rather freely, and when the bowels are constipated I have a syphon of Kissingen water and one of Vichy provided, and have them used conjointly, in quantities sufficient to relax the bowels a little. Children also do very well with a few drops of liquor potassæ added to the milk, say from two to five drops to the tumblerful, according to the age.

Where there is a good deal of restlessness at night, and the skin rather dry and hard, I give the acetate of potassa, three or four times daily, in doses of from six to thirty centigrams (one to five grains), in five cubic centimeters (a teaspoonful) of the liquor ammoniæ acetatis; if there is much arterial excitement this is improved by the addition of a drop, or a part of a drop, of the tincture of aconite.

Children bear arsenic remarkably well. Some time ago I reported a number of cases of infantile eczema, where the disease yielded in a very short time to Fowler's solution (liquor potassæ arsenitis), given alone; and since then I have had further proof of this. The remedy was given in cinnamon water, and of such a strength that each five or ten drops represented one of the arsenical solution. They were then given this in such a quantity that a child a year old began with a drop three times daily of Fowler, and the dose was gradually increased by one-fifth of a drop until two, three, or even more drops of the arsenical solution were taken thrice daily, or until there was some diarrhœa; the dose was then lessened. Under this plan the eruption quickly paled, and soon ceased, with little or no local treatment, and with few, if any, dietetic or hygienic directions. But I have never felt it wise to recommend this plan, or to practice it very largely, for fear of possible evil results from the free use of so powerful a remedy. It is well to know that arsenic can and will exercise such a power, certainly in some cases, for I hardly think this could

be relied on as its uniform effect—the cases were more or less selected.

In combination with other measures, however, arsenic should seldom if ever be neglected in the treatment of eczema; after the first year of life I make very considerable use of it in combination with the wine of iron, much as in the ferro-arsenical mixture of Wilson, which he lauds so highly.

The French arsenical mineral water, the Eau de Bourboule, is often of considerable service in infantile eczema; the dose for adults is from half to one tumblerful, with the meals; children may take a small wineglassful alone or mixed with the milk.

Besides alkalies, cod-liver oil, and arsenic, iron should never be forgotton in infantile eczema; wine of iron, the ammonia-citrate and tartrate of iron, and dialyzed iron, are especially applicable. Rabuteau's tasteless syrup of iron is also valuable, and very acceptable to children. I also make considerable use of the syrup of the hypo-phosphites of soda, lime and iron, and am more and more pleased with its effects. I do not use the syrup of the iodide of iron as much as do some, for I have seen it very often ineffectually employed by others.

In dispensary practice very many children with eczema receive the standard rhubarb and soda mixture, which contains about six centigrams (a grain or so) each of rhubarb and soda in five grams (teaspoonful) of peppermint water, and they are very commonly greatly benefited thereby. I think this well-tried combination is too much neglected in private practice, for the substitution of more agreeable, but often less serviceable remedies.

The extract or tincture of viola tricolor has been recently revived, as a remedy in infantile eczema. I have no great experience to offer on the subject, as I have generally found the other measures here recommended to be quite sufficient. The older French writers speak very well of it.

It is a little difficult, to give in a few words, the exact indications for the various remedies I have mentioned, and perhaps intelligent judgment will best decide, if it is borne in mind that it is the *patient* rather than the *disease* which we are to treat internally. The indications are more those suggested by educated thought, directed to restoring the system to perfect health, than to special remedies called for by the disease in question.

There are, however, tolerably clear lines of distinction between

classes of cases which call for an alkaline and depurative treatment, and those where cod-liver oil and more powerful tonics are at once demanded. Thus, in the full, ruddy-faced child, with an eczema tending to give a dry, red surface, very itchy, or perhaps exuding considerable serum when washed or scratched, a full tonic course of treatment would certainly aggravate the complaint, especially if the child came of gouty stock. Light purgative and alkalies would be followed by amelioration of the itchings, a lessening of the cutaneous congestion, and subsidence of the disease. On the other hand, the pale, strumous looking child, in whom the discharge tends to crust up into yellow masses, will be benefited by iron, arsenic, cod-liver oil, etc., at once. But this latter child, if care be not taken, may soon have the organs of life choked by the sudden influx of material to which it is unaccustomed, and will require the cooling treatment of an occasional purgative, possibly also alkalies.

Calomel is the better purgative for the first class of cases; rhubarb, castor-oil, etc., are better suited for occasional use in the second.

But of course no hard and fast lines can be laid down, and there will occur many cases which cannot be clearly put in either category. Not unfrequently we give tonics and builders-up of tissues with one hand, while with the other calomel, grey powder, alkalies, etc., are administered. It must also never be forgotten that the full-blooded arthritic case first described, will at a later period require the tonic course; for eczema is a disease of debility, whether there is a temporary and false appearance of hyper-activity of the system or not.

There are those who regard eczema as a purely local disease of the skin tissue itself, independent of any systemic relations; but it is hardly necessary to argue the untenability of this view, which has been abundantly shown elsewhere.* Certain it is that eczema in children has many constitutional relations, and while in certain cases the eruption may be largely or entirely removed by local remedies, its complete extinction must be by dietetic, hygienic, and medicinal measures as well.

It must ever be borne in mind, however, that the skin certainly is subject to acute inflammation, from purely local causes, as when croton oil is applied, or poison ivy, etc., and that in infants harsh

* Transactions International Medical Congress, Philadelphia, 1876.

usage may abrade and inflame the skin; all this is quite different from true eczema, and reasonable care, judgment, and experience, will readily distinguish the cases of each.

While the general measures advised for eczema infantile have not differed so very greatly from those which are required in other conditions, and while emphasis has been laid on the fact that it is the patient rather than the disease which is to be borne in mind for treatment, on the other hand, in the local management of the disease there is need of special experience and knowledge. It is in the local treatment of diseases of the skin, and especially of eczema, both in infant and in adult life, that wisdom is required to make just the right application; for a wrong one will pretty certainly not only do no good, but positively do harm.

The experience, both of the special and general medical profession, has undoubtedly given to the oxide of zinc ointment the palm for universality of use, and that perhaps rightly. But he is poorly able to treat infantile eczema who knows only oxide of zinc ointment, and that as it is directed to be made in the pharmacopœia. The officinal ointment is prepared with lard, which has twelve and a half per cent. of tincture of benzoin and sixteen and two-thirds per cent. of oxide of zinc (a drachm of tincture of benzoin to the ounce, and eighty grains of oxide of zinc). Now I have repeatedly seen this irritate tender skins, to which, if otherwise prepared, a zinc ointment was soothing. In the first place I never use lard in ointment, if it can possibly be avoided: my preference is for the cold-cream, the unguentum aquæ rosæ, which is made from almond oil, spermaceti, and bees-wax. This may possibly become rancid, but has but slight tendency to do so; it, as well as other excipients, should be watched, as a rancid oily matter is exceedingly irritative to a diseased skin. The unguentum petrolei or cosmoline, or the glycerite of starch, is preferable to the lard, but the rose ointment is really the best of all.

The strength of sixteen and two-thirds per cent. of oxide of zinc (eighty grains to the ounce) is frequently too great, and I seldom employ more than twelve and a half per cent. (sixty grains to the ounce), and far more often but six and a quarter per cent. (thirty grains) in infantile eczema. I do not benzoate the ointment, as I find this sometimes irritates.

But there are many other measures suited to different states of eczema in children which are far more serviceable than simple zinc

ointment alone. The old fashioned tar ointment is a remedy which has fallen into unmerited neglect. As directed in the pharmacopœia, of equal parts of tar and suet, it is much too strong for application to a child's skin, or to any inflamed surface; but when diluted with three times its quantity of rose ointment, with six and a quarter to twelve and a half per cent. of oxide of zinc (half a drachm to a drachm of oxide of zinc in the ounce) it forms one of the most valuable anti-pruritics possible in eczema. Made thus it can be applied even upon a very young child and with the happiest effects.

Bismuth sub-nitrate forms a very good ointment for infantile eczema, used in a strength of six and a quarter to twelve and a half per cent. (half a drachm or a drachm to the ounce). Tannin also acts very happily when there is a dry, red and somewhat scaly surface. Likewise a weak white precipitate ointment.

In the management of infantile eczema very different results are obtained according to the mode in which applications are made to the diseased surfaces. In general, ointments should be spread upon cloths and laid upon the affected portions, if there is any tendency to exudation. More harm is often done by the efforts of the attendant to rub on the ointment than gain is had from the application itself. If laid on with a cloth all this is avoided; the dressing should, of course, be renewed occasionally.

In the management of infantile eczema, attention should also always be paid to the use of water by the attendants, for most erroneous methods and ways are constantly practiced, and the exciting and continuing cause of eczema in the young, as well as the old, will not infrequently be found in the use of water; sometimes, also possibly, in the soap employed. The child, then, in whom eczema is developing, should not be freely washed, as if in health; but if washed at all, the water should be properly medicated. I generally have it only wiped off, as much as cleanliness actually demands.

If a bath has to be given, I have a mixture of carbonate of potash, carbonate of soda, and powdered borax made, of which from four to eight parts are used to one thousand (two to four teaspoonfuls for each gallon of bath water), together with about half that proportion (from two to four teaspoonfuls) of dry starch. This is used without soap, and on taking the child from the bath, it is immediately dried without friction, and a proper medicament

at once applied. If there is tendency to the development of acute papular eczema, the whole surface should be well powdered after drying; as, with lycopodium powder.

The practice of many is to wash the parts directly affected with eczema; or as I have known the advice of the physician, it was to keep the part well washed and clean. Now this is impossible, at least in eczema in children, which is at all acute. As often as the surface is washed, the outer, lightly-formed epidermal cells, are removed before they have acquired any firmness, and the process of repair is hindered thereby. My constant direction is *not* to wash a part until I direct it to be done, and in many cases that is very seldom. Occasionally the mass of accumulation becomes so great that the ointment does not penetrate it, and a single washing is of the greatest value, in allowing the astringent to come down directly upon the affected surface. I always direct that the application be made in the quickest time possible after the washing, otherwise a new coat of exudate has formed and hardened, and the medicament lies on top of it, and fails of its end.

In children, I seldom have parts which are at all acutely involved in the eczematous process, washed more than once or twice a week; sometimes not at all for a much longer time, if necessary. Occasionally, when the crusts are quite thick, as upon the scalp, we have a very valuable agent which will penetrate them, viz., cod-liver oil, whose value as a local application in eczema, is by no means small.

A word may here be said in reference to the use of poultices in eczema, especially in eczema infantile. In the almost five hundred and fifty cases of eczema in children under five years of age, of which I have notes, I believe I can count on the fingers of the hands the number of poultices which have been applied by my directions; I almost never use them, and yet it is the commonest thing for me to hear of others directing them to be used, and, I believe, generally to the detriment of the case. Very rarely, when there is a thick crust which refuses to come away with ointment or oil, a single poultice may be applied for a night, the crusts removed in the morning, and the ointment at once reapplied. Sometimes a second poultice may be required, but very rarely more, and I never have the scalp or other eczematous surface treated continuously with poultices, as is frequently advised.

When eczema has lost its very acute elements, and when under such treatment as has been mentioned, we find that it refuses to yield, we may, as in the adult, resort to stimulation, and this, if applied correctly, will often furnish the best results. I not infrequently use the compound tincture of green soap of Hebra, composed of equal parts of the oil of cade, green soap, and alcohol, and find it of great value. If it is too strong, and gives much pain in the application, it can be diluted with a little water at the time of using. The surface is to be quickly, but firmly, rubbed with a cloth dampened in it; it is then dried off, and the appropriate ointment, immediately applied. When this is used it is far better always to have the ointment laid on a rag, as the extra friction of an application with the finger or otherwise may be just too much.

This compound tincture of soap is a very valuable anti-pruritic, and will ofttimes arrest the itching excellently. I have not yet mentioned an ointment which is used by many for this purpose, and that is zinc ointment, with twelve and a half per cent. of oil of cade (a drachm to the ounce), rubbed into it. I formerly employed this largely, but for three or four years have used the combination of the ointment before described, and much prefer it. The addition to the ointment of twelve and a half per cent. of tincture of camphor, or a corresponding quantity of powdered camphor (a drachm of tincture of camphor, or a few grains of powdered camphor in the ounce) often arrests the itching well.

Stronger ointments are sometimes called for in infantile eczema, but the danger is rather in the direction of using too strong applications than too weak, for we must ever remember the exceedingly tender, delicate organism, with which we have to deal. When there is thickening in localized patches, which proves obstinate, we may often get absorption from one of the mercurial ointments, and I use a good deal the unguentum hydrargyri oxidi rubri, diluted with three times its quantity of rose ointment; but even this I have repeatedly seen to be too strong, exciting fresh papular eruptions. The citrine ointment, diluted three, four, or more times, will also be well borne where patches are chronic and infiltrated.

I have by no means exhausted the subject, nor have I given all, or even most, of the remedies and measures which are of daily service in overcoming infantile eczema. To endeavour to do this,

and to give indications for the use of each remedy which would be unfailing, would be far beyond the scope and possibilities of the present short paper. The intention was not to exhaust the subject; nor to furnish formulæ for practice, as these may be found in many good text books.

The desire of the writer was rather to direct attention to what he deems wise to call the *management* of infantile eczema, rather than its *treatment*. The object of the paper is to show that arsenic and oxide of zinc ointment are not the only weapons to be employed against this very frequent and very distressing disease; to show that as it depends upon many causes, the measures for its relief must be multiform. Also it is desired to call attention to its frequency, and to the neglect with which it is so often regarded by the physician, and consequently by the laity; likewise to the fact that its cure should be and will be, if properly accomplished, followed or accompanied by improvement in the health of the patient; and that, therefore, there is absolutely no danger in curing infantile eczema. Finally, the object of this paper is rather to elicit discussion for a further elaboration of the subject.

ON THE USE OF THE

SOLID RUBBER BANDAGE

IN THE TREATMENT OF

ECZEMA AND ULCERS OF THE LEG

BY

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ON THE USE OF THE SOLID RUBBER BANDAGE IN THE TREATMENT OF ECZEMA AND ULCERS OF THE LEG.*

FEW cases of chronic affections of the skin are more distressing to the patient and annoying to the physician, than those of eczema and ulcer of the leg which are dependent upon varicosity of the veins; and it is the fact these cases occur in those who are least able to rest, and to put themselves in a condition for recovery that makes them more rebellious to treatment. Every one can recall cases of chronic eczema of the legs (often erroneously called erysipelas), and of ulcers, which either, they have treated for a time with moderate success only, until the patient was tired of treatment, or else in which they have simply advised the wearing of a bandage, or a laced- or elastic-stocking, hardly expecting more than a palliation of the troublesome symptoms. My mind runs back, during the past few years, to many many such cases in Dispensary practice, when relief has been given time after time, only to be again sought for when some unusual amount of standing or exhaustion has occasioned the old enemy to break out anew. And these cases often occur in hard-worked house-wives, the mothers of large families, whose very existence depends upon their being on their feet all the day, like as not at the tubs or ironing table; the same is seen in men or women who stand continuously as cooks, waiters, factory hands, etc. And these cases are also very commonly seen in those in whom poverty has also had its share in producing the lesion, and scanty and poor food has so relaxed the tissues that the veins easily become distended, and the capillaries readily dilate and rupture.

Now to attempt to put such patients in bed is utterly out of the question, and even when it is possible it is well known that the results of treatment in bed are often temporary, and that when the patient resumes the standing position the eczema or ulcer may and frequently does return.

* Read before the New Hampshire Medical Society, June 19, 1878.

If an ordinary bandage, or an elastic- or a laced-stocking is used to keep the disease in check, we have the constant distress and aggravation of the trouble occasioned by the sticking of the dressing to them, or to cloths placed beneath them, while the firm, non-elastic tension of the cotton bandage and the laced-stocking is often really distressing to the patient: the cost of elastic web stockings and the necessity of their frequent renewal is a serious obstacle to their use in very many cases.

For these reasons the solid rubber bandage promises, I think, to effect a revolution in the treatment of such cases, and will be hailed with pleasure by multitudes of physicians and patients.

One year ago Dr. H. A. Martin, of Boston, brought the subject before the notice of the American Medical Association,* and his claims for the solid rubber bandage were so extraordinary that I determined to make use of it on the first opportunity, feeling assured that this was just the means I had long wanted for the cure of a certain class of my patients whom I felt certain were not receiving all the relief which medical skill should furnish them. The article fell under my notice some months after it was delivered before the Association, so that my time for testing the matter has been somewhat limited, (shortened also by sickness and consequent absence from work and from the city), and the actual number of my cases is small compared with the several hundred cases in which Dr. Martin has employed it.

But the subject has appeared to me to be of such vast importance, and my results with this method of treatment have been so uniformly good, as have also those obtained by others to whom I have recommended it, that I feel it my duty to again present the subject, somewhat modified, and to urge with all my powers the immediate attention of the profession to this new and exceedingly valuable addition to our therapeutical resources in the management of some of the worst cases which can distress both patient and physician. Not claiming originality in the matter, I shall consider myself free to use Dr. Martin's valuable paper as best I may in developing the subject and impressing it upon my hearers; and, as my experience has been identical with his, I shall of necessity refer to many of the points to which he calls attention, and shall not always refer to him, but here give him all credit for his work, and advise my hearers to read or re-read his paper in connection with this. He treats of the use of the bandage in ulcers and varicose conditions of the leg, also in certain surgical aspects of diseases and injuries of the joints, etc., but does not mention eczema, although he alludes to having used the bandage in some cutaneous affections of the legs, "to which" he says, "very learned words of sesquipedalic length are applied in the jargon of dermatology," "that great science of words," as he styles it in another place.

My practice being confined to diseases of the skin I purpose to

* *Chicago Med. Journal*, October, 1877; Transact. Am. Med. Asso. Vol. 28, page 589.

give you my experience in the use of this measure in eczema and ulcers of the leg, as it is only in these lesions that I have myself employed it; I will afterwards briefly allude to other conditions in which it has been or may be successfully used. I will very briefly mention the cases, because more impression is thus made than if simply the results of treatment are stated in a general manner.

CASE I. *Long standing eczema of the leg with great induration.* The most striking case perhaps, was the first one to which I applied the bandage, and as this patient has been the longest under observation, both before and since its application, it is perhaps to me the most instructive and valuable of all.

Mrs. E. F., a large and rather fleshy woman of 45 years, applied for treatment at Demilt Dispensary, in February, 1877. She then had well marked tubercular syphilis about the nose and upper lip, with many cicatrices from the same on the forehead and elsewhere. Her right leg presented a most distressing state of disease, which had existed more or less severely for over nineteen years. It was enlarged from the knee down to and including the ankle, so as to be twice the size of the other; was hard with the thickening of the skin; its surface exhibited a raw and exuding eczema to nearly its entire extent; and there were numerous ulcers, especially about the ankle, with hard, sharply-cut edges and indolent bases. The leg itched intensely and she scratched it more or less; it also gave her almost constant pain while standing, which she was obliged to do continually, washing, and caring for the family. Some of the ulcerations of the leg had very much the appearance of those of tubercular syphilis, and I had great hopes that the treatment for that disease would also be of much benefit to this portion of her body.

Not to enter too much at length into clinical details, suffice to say that she attended the Dispensary quite faithfully, and was treated assiduously until August; but that the leg entirely refused to heal, although the syphilitic lesions on the face yielded to proper measures. This medication would often seem to make the eczematous element on the leg worse, and yet when the antisyphilitic was discontinued the tubercular eruption reappeared. Various local measures of approved kinds were also ineffective on the leg, owing, undoubtedly, to the insurmountable obstacle of her occupation.

On November 22d the rubber bandage was applied at the Dispensary, and the internal treatment for the syphilis was continued.

On December 4th she was exhibited before the gentlemen attending my clinic, and the note was made that the leg was better than it had been for nineteen years. The limb was then reduced at least one-half in size, and was hardly larger than the other; the entire surface was smooth and dry, and very red, the enlarged papillæ showing distinctly beneath the thin layer of epidermis; many of the ulcerations had healed: she experienced no pain or

itching in it, and she had been on her feet all the time as before. There had been no local treatment employed of any kind, except the application of the elastic bandage, as will be described later.

In three weeks more the ulcers had healed, and the leg appeared as well as the other, except the red, glossy condition, which still remained. This patient has been under observation and treatment ever since, for her syphilis; the leg remains perfectly well, and although she still continues to wear the rubber bandage for the support it gives the limb, she has no signs of her former trouble; the leg is the same size as the other, every trace of the very great thickening is gone and, consequently, there is no itching or pain. Varicose veins seem to have played a very small if any part in this case.

CASE II. *Acute eczema accompanying ulceration of the leg.* This case is almost as striking: Mr. J. P. B., aged 41, a mercantile reporter, presented himself at my clinic at the Out-Patient Department of the New York Hospital, March 11th, 1878, for the treatment of eczema of the leg with numerous ulcerations, with the following history:—

Nine months previously he had had acute inflammatory rheumatism, affecting principally the ankles. This was followed by swelling of the leg, with enlarged veins and the appearance of several ulcers. For the ulcers he had been for six weeks laid up in the hospital, and as the ulcerations were in part healed, and his business prevented further confinement, he applied at my clinic for subsequent treatment. When first seen, the whole of the left leg was greatly enlarged from the knee down; about the ankle there was much œdema: the surface was red and glazy, much of it exuding copiously, and with a number of rather small ulcers in various situations. It was done up in lint, covered with a cotton bandage; he had on a large cloth shoe, and was quite disabled by the bulk of the limb, and the pain and itching. All the dressings were removed and a rubber bandage applied.

March 15, four days afterward, it was recorded that there was great improvement; very much of the swelling was gone; the leg was hardly three-quarters the previous size; many of the eczematous spots and some of the smaller ulcers were healed. There was little or no itching and no pain. He had returned to his business immediately after the application of the bandage, and on the preceding day had walked six miles.

March 20. All the ulcerations but two are healed. No eczema remains; the leg is about the natural size and he walks all day with ease.

March 27. The leg is about as well as ever: he is now for the first time put under some constitutional treatment for eczema on the arms.

CASE III. *Severe chronic eczema rubrum of both legs and thighs; one only treated by bandage.* Mr. H. L., a large, rather corpulent gentleman, aged 56, seen in private practice, has had eczema of

both legs, for a year and a half, gradually extending so as to cover the entire limbs, to the groins, during the past four months. He has been under approved treatment at the hands of a well-known New York physician during a considerable period, who finally referred him to me. He gives the history of having had eczema over much of the body during the first seven years of life. He has had asthma since a boy, until the last few years, when he has remained free from it. During the past year and a half he has been constipated, depending on the compound cathartic pills for movements from the bowels.

When first seen both legs, from the ankles to the groins were the seat of a red, exuding eczema, terribly itchy, and showing many signs of the results of scratching. Both legs were covered with cotton wadding and bandaged firmly, and he was in the habit of removing this two or three times a week, and washing the legs thoroughly, and coating them with camphorated vaseline. There was also more or less eczema upon the arms. He was treated in a general way with considerable relief to the itching, and on

May 23, the rubber bandage was applied to the right leg, from the toes to the groin, two twelve-foot, three-inch bandages being used.

May 25. To-day it is recorded that there is great improvement in the limb to which the rubber bandage was applied ; all itching has ceased in it ; when removed, the surface is red and shiny, but perfectly dry and with a moderately firm epidermis. The left limb, which was left in the cotton, still exudes, is itchy and has a considerable amount of scaly crusting upon it.

June 1. The right leg to which the bandage was applied is virtually well. At night when it is covered with cotton batting, there is no exudation and no itching. He begs to have the same applied to the left leg, which is still scaled and crusted, and at times intolerably itchy ; formerly the right leg was the worse.

CASE IV. Cath. S., aged 65, applied at Demilt Dispensary, in November, 1877, with chronic eczema rubrum of the left leg, of two years duration. As she was obliged constantly to be on her feet, she was treated with but indifferent success.

Feb. 19. To-day a rubber bandage was applied.

Feb. 26. Leg very much better.

March 5. Still marked improvement. She did not return after this date, and as she had paid for the bandage and it gave satisfaction we may believe that the ultimate result was good.

CASE V. Ellen C., aged 50, applied at Demilt on February 20th, 1878, with eczema rubrum of the right leg; she was treated with moderate success for a while.

March 2. A rubber bandage was applied and other treatment stopped.

March 16. The leg is much better, the swelling has disappeared, and the limb presents a smooth, moist, and slightly exuding surface, over which the enlarged papillæ are plainly evident. The

patient expressed herself as much relieved; she has not been seen since.

CASE VI. George C., a fairly developed young man of light hair and delicate skin, aged 17 years, applied at the New York Hospital Out-Patient Department, May 3d, 1878, with an eczema of the right leg, the result of an injury two months previously. Under appropriate treatment there was considerable improvement, when on

May 20, the rubber bandage was applied and other treatment stopped.

May 24. Considerable improvement; much of the raw surface is healed, there being very little exudation when the limb is bared. The itching, which was previously considerable, ceases while the bandage is on. Several small ulcers which existed are healed, and there is some artificial eruption excited by the bandage, in the way of small, scattered, acutely inflamed, and very superficial pustules; for these he is ordered first to cover the limb with thin muslin, and then to apply the bandage.

May 27. Very considerable improvement; the acute irritation has disappeared and most of the eczema is well.

CASE VII. Thomas C., aged 56, a night-watchman, applied at Demilt, November 3d, 1877. The whole right leg was the seat of an eczema from the knee down, largely due to varicose veins, the result of his occupation, although there was also some eczema on the arms. After a short course of treatment with diachylon ointment and a cotton bandage, on November 24th, the rubber bandage was applied in the presence of the class, and all other treatment was discontinued.

Dec. 1. Very great improvement, much of the moist surface is smooth, dry and glossy; the itching has ceased: he has continued his occupation, and remains standing all night with ease.

Dec. 8. There is still very great improvement, and the surface is largely covered with healthy epidermis; there is no itching, and none of the aching pain from the varicose veins. The patient expresses himself in the highest terms as to the very great relief to all the symptoms afforded by the bandage. Three days after this his wife came bringing the bandage, saying that the patient had met with an accident, breaking his thigh, and as he was removed to a hospital the bandage would not be needed.

CASE VIII. William McC., a laboring man aged 53 years, was first seen March 11th, 1877, at the Out Patient Department of the New York Hospital. He had a patch of chronic, thickened eczema, about four by two inches in diameter, over the middle of the left tibia: it had been of at least three months duration. A rubber bandage was applied without other treatment, and on March 15th, it was recorded that there was great improvement in the appearance of the patch, and that the itching which had before been distressing had about ceased.

March 27. Still great improvement, the patch is nearly well.

The treatment was ordered to be continued and the patient did not return.

CASE IX. Mrs. S., aged 53, a fleshy lady, who had always enjoyed excellent health, came to my office April 6th, 1878, with a patch of hard, thickened, rough, and dry eczema on the right instep; also with some eczema on the left foot and on the right forefinger. The patch on the right instep extended nearly around the ankle, and was nearly three inches in width; it itched excessively. She had had a similar eruption two years previously, and had been treated for the same by another practitioner with little benefit, from February to June, 1877.

She was given treatment suited to her case, and made slow but steady improvement.

May 18. The surface on the right ankle is now dry and scaly, and still gives much annoyance by the itching. The thickening does not yield to considerable stimulation, and a rubber bandage is applied from the toes to the knee.

May 25. The affected patch has improved greatly beneath the rubber, the itching ceased while it was on. Three days ago she left it off and the same day was greatly exposed to cold, riding a long distance; the following day she had a severe chill with high fever, and yesterday the upper part of the leg became hot and red in blotches, swollen and burning, and to-day there are large patches of congestion along the whole middle of the leg. She feared that this was caused by the bandage, but was assured to the contrary; the eruption did not at all resemble the very superficial eruption of minute pustules which the bandage sometimes occasions; it was probably due to the sudden and severe exposure of the leg to the cold, after the tissues had been relaxed by the profuse sweating which occurs beneath the rubber. She was ordered a cooling lotion of lead and opium, with elevation of the limb, and an alkaline diuretic.

May 28. The acute eruption has subsided, leaving the original patch much improved by the rubber treatment, though there is still redness and thickening.

June 17. To-day there is very much less thickening; there is no itching while the bandage is on; but when removed at bed-time, the desire to scratch the part is still severe. For this she is directed to rub the diseased surface with the compound tincture of green soap, and to apply diachylon ointment during the night, carefully removing it wholly before replacing the bandage in the morning.

CASE X. Elizabeth O'H., aged 36 years, was first seen by me at Demilt, January 17th, 1878. She came for the treatment of large and painful ulcerations on the left leg, mainly about its middle and upper part, with the history of their having developed from a scratch received five months previously. The whole leg was the seat of a large, smooth, somewhat contracted cicatrix from a scald early in life.

Although there was considerable varicosity of the veins, the

ulcers had so much the appearance of syphilis, that in spite of the absence of corroborative history, (which is so often wanting in women) she was placed upon an anti-syphilitic treatment, which was continued for over six weeks without producing any improvement in the sores.

At the end of this time an eczematous eruption developed spontaneously upon the right leg, which was also somewhat varicose, and on March 14th a rubber bandage was applied over the eczema; a mixture containing acetate of potassa was given, and the ulcerated left leg was still treated with a mild calomel ointment.

March 26. The itching of right leg has about ceased, and the condition is much improved; no change in left leg.

April 11. Still improvement in eczema; no other local treatment but the bandage.

April 26. The eczema is about well: bandage continued on account of the varicose veins.

June 15. The results of the treatment of the eczema were so good, that the patient has cut the bandage in two, in order to have the same applied over the ulcerated limb, and still to continue the support to the varicose veins in the right leg.

The two following cases of eczema treated in this manner, are furnished me by my friend, Dr. F. B. Lawson, who employed the bandages at my suggestion:

CASE XI. Mrs. A., German, aged 38, married, with seven children; besides attending to household duties, she stands many hours behind a lager-beer bar. She was found in bed, pulse 110, temperature 102°, complaining of great pain in right leg; bowels constipated, has headache and backache. The right leg below the knee was enormously swollen, hard and hot, and the whole surface red, or covered with thick crusts, a perfect type of eczema rubrum, with varicose veins.

The bowels were relaxed with compound cathartic pills; a diuretic was given, and the crusts were removed by means of repeated, cold flax-seed poultices; on the following day a rubber bandage was applied from the toes to the knee, and a towel was directed to be kept wet with cold water over the bandage.

Three days later the patient was going about the house as usual, and said that her leg had not felt better for years; there was great reduction in the size of the leg, and the redness had almost disappeared. She applied the bandage herself with ease, washing the part every evening on removing it. Two small ulcers which existed near the internal malleolus were healing well.

Four days later she called at the office, the leg looking well and the ulcers healing.

May 1. Nine weeks later, the affected leg was about well, and a common roller bandage was ordered in place of the rubber one. The left leg was found to be swollen and tender about the ankle; a rubber bandage was applied, but it gave so much pain that it was removed and a thin layer of cotton interposed.

June 2. The right leg is quite well of the eczema, and the left was very comfortable until she left off the rubber bandage a few days ago, when it again became swollen and hot; she had been standing much. She is several months pregnant.

The very great severity of the case, and the very rapid yielding of the disease to the rubber bandage, even during pregnancy, are points of special interest.

CASE XII. Mrs. C., aged 63, a widow, who had had ten children, presented herself with an eczema of the right leg, especially marked near the ankle; it itches and burns, and at times discharges serum; there is a small ulcer over the malleolus. A rubber bandage was applied, with instructions to cleanse the leg and re-apply the bandage daily. She was not seen again for many weeks, when the affected leg was found to be entirely well. She said that the improvement had begun immediately on the application of the bandage.

CASE XIII. J. E., aged 38, was admitted to the New York Hospital, service of Dr. G. A. Peters, April 15th, 1878. He had had the femoral artery ligated two years previously for popliteal aneurism, and since that time has suffered from eczema of the leg. He was given a wash of bi-carbonate of soda, a drachm to the pint, to be applied on sheet-lint, and a rubber bandage over it.

At the end of three weeks he was discharged cured.

CASE XIV. The following case exhibits the value of this plan of treatment in chronic dermatitis, a state often closely resembling eczema, but due to local causes entirely. In this instance it was owing to the woman's occupation which necessitated her being all the time on her feet: Caroline McC, an English woman of 50 years, came to me at Demilt at the end of September, 1877. She had a considerable amount of varicose veins, and the whole right ankle was surrounded by a mass of inflamed and thickened skin, which made standing very painful. Some portions of the diseased skin showed immensely hypertrophied papillæ, which stood out separate of a brilliant purple color, and which bled easily when much irritated. The condition had lasted many, many years, and at times she was almost, if not quite, laid up with her sore foot.

She had long had treatment from many hands, and seeing that mild measures had always been futile, she was given a pretty strong caustic potash wash, with directions to rub and stimulate the parts excessively once a day, and then to cover them with a zinc ointment (℥ j ad ℥ ss.) To accomplish this she promised to rest for a while. There was very considerable improvement following this plan of treatment, whenever resorted to, but as she got relief each time, she would then neglect the matter, and would return with the foot as bad as ever; she dreaded the pain of the caustic application, and begged for other treatment.

February 9. Rubber bandage applied from toes to knee.

February 23. The leg is very much better; the thickening has

largely diminished, and with it the pain; the papillary prominences have about disappeared. She feels that she cannot do without the bandage.

May 7. The leg is all healed, and the thickening of tissue gone. She still has pain in it at times.

The following cases exhibit the value of this solid rubber bandage in ulcers of the leg:

CASE XV. *Very painful varicose ulcer of left leg.* Christopher O'H., a laborer, 53 years of age, applied at Demilt Dispensary, August 18th, 1877. He then had a varicose eczema of the posterior surface of the left leg, upon which an ulcer soon developed in spite of careful treatment, in consequence of his being on his feet continually. He attended quite faithfully, and at times the ulcer would almost heal, when his work would oblige him to neglect it, and it would become very much irritated.

February 29. The ulcer is very painful, about an inch in diameter, situated on the back of the calf on the lower half of the leg. He is confined to bed with it, and says he could not rise if the house were on fire. It bleeds very easily; the veins of the leg are considerably varicosed. A rubber bandage is applied from the toes to the knee while in bed.

February 23. To-day he presents himself before the class, and says that immediately after the application of the bandage he rose from bed, and has been up and around since, feeling perfectly comfortable. The ulcer bleeds as the bandage is removed. The day following the application of the bandage he walked several miles with perfect ease.

March 16. Ulcer healed; feels very well.

April 25. The leg remains well; patient is at work. He still wears the rubber bandage, and finds it a great comfort to the varicose veins.

CASE XVI. *Hard-edged varicose ulcers of right leg.* Lawrence G., a waiter-man, aged 57 years, came to the New York Hospital, Out-Patient Department, on March 3d, 1878, with very painful varicose ulcerations of the right leg. There were several indolent ulcers, with hard, everted edges, and unhealthy bases. He was quite incapacitated from work, and had failed to find relief from various remedies. A rubber bandage was applied at once from the toes to the knees, no other dressing being used. He was directed to remove it in the evening in bed, to wash the leg and the ulcers with tepid water, and to leave it without dressing during the night. The bandage was to be cleansed, and hung up to dry, and to be put on again in the morning, before stepping out of bed. In the day time he is directed to walk considerably.

March 10. There is great improvement; healthy granulations fill the cavity, and much of the hardened edges have melted away.

March 25. The ulcers have cicatrized from the sides, and all of them are about well. There is but one very small spot, one-quarter by two-thirds of an inch in diameter on the ankle, yet unhealed.

The patient did not return, and as the progress had been so extremely satisfactory to him, it is fair to suppose that he became, and remains quite well.

CASE XVII. Michael G., a laborer, first came to me at Demilt Dispensary, October 9th, 1877, with a varicose ulcer on the back of the right leg. He was treated with the ordinary stimulating treatment, with varying results, the leg being better and worse, until March 12th, when a rubber bandage was applied, and he was instructed how to apply it himself every morning.

As he had been a faithful patient, and was a hard working man, it is fair to suppose that his failure to return was due to the perfect relief afforded by the bandage.

CASE XVIII. Peter C., a laborer, aged 53 years, applied at my clinic at Demilt, March 5th, 1878. He had an ulcer on the left leg, probably due to varicose veins, as it possessed all the features ordinarily seen in such. I may here remark that these lesions are exceedingly common among those of the poor of this city, whose occupations require them to be long upon their feet. He was treated with a balsam of Peru ointment (℥ j ad ℥ j), which produced some benefit for a while. On March 23d a rubber bandage was applied, and the patient shown how to re-apply it, with directions to wear it until well. As he was at work, he did not return to report results.

CASE XIX. James F., a clerk, aged 48, applied in the service of my colleague, Dr. Morris, as an out-patient at the New York Hospital, in August, 1877. He had varicose ulcers of the leg, which were treated by approved methods, with but indifferent success.

In March Dr. Morris applied the rubber bandage, and in a few weeks the ulcerations had entirely healed, no other treatment being employed.

The following cases, occurring in the New York Hospital, in the service of Dr. Geo. A. Peters, are kindly furnished me, with his permission, by the house surgeon, Dr. S. S. Kahn.

CASE XX. G. H., aged 37, was admitted April 15, 1878, with a varicose ulcer of the leg, four by two inches, which had existed for two years. It was treated by strapping and stimulating ointment for two weeks, with no improvement. A rubber bandage was then applied, and changed every second day. Cicatrization took place very rapidly, and in seventeen days he was dicharged cured.

CASE XXI. *Ulcer after severe laceration of leg.* F. M., aged 8 years, received a lacerated wound of the leg, eight inches long, from being run over; the muscles were torn, and the bone exposed. The wound was under the Lister treatment for fourteen days, when there resulted a granulating ulcer, eight by two inches in size. A rubber bandage was applied, and in three weeks it had cicatrized up to two and a half inches by one-half inch, and is progressing very rapidly at the time of this report.

CASE XXII. *Ulceration of the foot after severe laceration.* R.

D., aged 40, was admitted on March 2d, with a contused and lacerated wound of the dorsum of the foot, with compound fracture of the toe. When the slough separated, the anterior half of the dorsum of the foot was gone. The resulting ulceration was treated with usual measures until April 15, when it was about one-half its original size, but it had stopped healing, the edges became indurated, and the base indolent. Active stimulation failed to produce any effect; actual cautery failed to induce repair, and no change took place in it, until on May 15th a rubber bandage was applied.

June 3. The ulceration has made rapid progress in healing since the application of the bandage, and to-day there is a small, healthy, level, granulating surface, one-fifth the size of the original ulcer, which is healing very rapidly.

CASE XXIII. *Abscess over ankle.* J. L., aged 38, was admitted to the New York Hospital April 15, 1878, with an abscess of the ankle, which had opened spontaneously prior to admission. There was found a small opening from which sinuses ran in different directions; everything appeared sluggish. He was treated by astringent injections, and an ordinary bandage for six days, with little or no change.

A rubber bandage was then applied, and in six days more he was discharged cured.

CASE XXIV. *Ulcerations from burn of arm and forearm.* J. S., aged 42, was admitted December 20, 1877, with extensive burns of the face, back, neck, both arms and right ankle, received at the Barclay Street explosion and fire. After the immediate effects of the burn had passed off, including an erysipelas on the sixth day, the resulting ulcerations were treated by strapping, with frequent applications of nitrate of silver, and repeated skin graftings. Some of these latter took, but at the end of three months after the accident there was still a very extensive ulceration of the right arm, which progressed very slowly towards recovery.

March 24. The ulceration on the right arm extends from the wrist to two inches above the elbow, involving the entire anterior surface, and at the middle of the forearm reaching entirely around the member. A rubber bandage was applied over the whole forearm.

April 14. The ulcerated surface is becoming less; he is discharged, and made an out-patient, returning every second day; still to wear the bandage.

May 20. There are now but four or five ulcers left on the surface of the forearm, an inch and a half in diameter; the bandage to be continued.

CASE XXV. *Enormous ulcerations of arms after a burn.* G. H., aged 17, another victim of the Barclay Street disaster, was admitted December 20th, 1877. He was frightfully burned, much the same as the last patient, and was treated similarly for three months, with the result of having both arms covered with granulating surfaces, which refused to heal.

March 22. Rubber bandages are applied to both arms, which are the seat of enormous masses of exuberant granulations.

May 27. The healing has progressed rapidly and steadily, and now on the right forearm are only two spots of ulcerative surface, two inches in diameter, very healthy looking, and on the left arm there are also two ulcers, each about an inch in diameter. The granulations are level with the surface, and cicatrization is progressing well. The patient is still in the hospital.

CASE XXVI. *Ulcerations from a scald of thigh and leg.* R. S., aged 27, was admitted December 22, 1877, suffering from an extensive scald from escaping steam. The entire outer side of thigh and leg and ankle were implicated. On the separation of the slough at the end of a week, there was an ulcerating surface down the whole extent, to the breadth of four to five inches. It was strapped from January 12th to March 22d; grafted freely (about 40 grafts took); burned with nitrate of silver, etc.; and at the last date there was still a mass of exuberent granulations over almost the entire extent, which refused to heal.

March 22. Rubber bandages are applied from the foot to the groin.

May 20. The progress of cicatrization has been very rapid beneath the rubber; the improvement could be seen daily. By the end of a week the granulations were on a level with the skin. There is now but a single spot of ulceration on the thigh, an inch and a half in diameter, and one of about the same size on the leg. The discharge was very profuse for the first few days, so that the bandage was re-adjusted several times daily; this gradually diminished as the cicatrization progressed. The direction of the bandage was reversed every alternate day, to overcome irregularities in the granulations resulting from unequal pressure.

The contrast in the labor and expense of the dressing was very striking in this case. Before the use of the bandage about two yards of adhesive plaster were consumed daily in each dressing; with the bandage no other measures were required.

CASE XXVII. *Extensive and severe burns from nitric acid.* Edward D., aged 38, was admitted to the New York Hospital April 17, 1878. After the separation of the sloughs, rubber bandages were applied to the forearm and leg. The result up to June 3d has been a prevention of exuberant granulation, and a reduction of the size of the ulcerating surfaces about one-half their original dimensions. There were, however, some drawbacks in the case: sloughing took place unexpectedly over the crest of the tibia for about four inches. Although only moderate pressure was applied by the bandage, it was perhaps more than the weakened vitality of the tissues could bear. On the left forearm the bandage did well for a few days, when severe hemorrhage occurred twice beneath it, which finally required Paquelin's cautery before it was controlled.

In addition to the cases here detailed, I have employed the rub-

ber bandage in other cases, and I have reports of its use in the Mount Sinai Hospital, where certain cases did excellently under it; they need not be given. The bandage has also rendered excellent service in the hands of several other of my professional friends. The cases here narrated are quite sufficient to illustrate the subject, and all the experience I have thus far obtained confirms in every respect the claims made for this method by Dr. Martin; claims which are so extraordinary as to possibly give rise to a doubt as to their truth in the minds of those who were not assured of the writer's veracity, and who applied neither reason nor experience to prove or disprove the facts.

A few remarks in regard to the details of this method of treatment may render the subject more clear to my hearers, and may perhaps assist some in employing it.

First, in regard to the bandages: they are made of the best, solid, pure rubber, and are very elastic. They are twelve feet long and three inches wide, as I have employed them, though they may, of course, be made of any desired dimensions.* On one end a piece of cloth is cemented, an inch or so wide, to give firm attachment to the tapes which are to tie the free extremity. These tapes should, of course, be rolled inside, and the bandage prepared for application exactly as any other roller bandage. With a little care these bandages may be worn for a considerable length of time. In the first case I have given, the patient has worn one of Dr. Martin's bandages for more than six months, and it is now as good as when first applied, with the exception of one slight tear. Dr. Martin has known a single one to be worn two, three, or four years, and has even cured several successive poor patients with the same bandage, which was yet perfectly serviceable. It is to be remembered, however, that grease or glycerine must not be applied at the same time, for they will soon destroy the elasticity and worth of the bandage. That this is not necessary will be seen from the history of the cases, and from what will follow.

Second, as to the cases to which it is applicable: I have treated of eczema principally because this disease comes under my notice more than any other. Dr. Martin laid more stress on the treatment of ulcers. I may remark then, first, in regard to the principles of treatment involved, that the *idea* of the rubber bandage is the protection and support of the tissues, and where these are indicated it will do good. Much of the eczema of the lower leg is associated with, and more or less dependent upon, a

*The bandages I have employed are made by the Goodyear Rubber Curler Co., 729 Broadway, New York, and cost a dollar and a quarter each, for those of the dimensions given. Those employed by Dr. Martin are made of rubber twice as thick, and are of various widths and lengths. For those ten and a half feet long by three inches wide, I paid two dollars and a half each, or double the cost of mine. They may be obtained of T. Metcalf & Co., 39 Tremont Street, Boston, Mass.

varicose condition of the veins, and it is generally this element which makes the disease so rebellious to ordinary measures; and even where the veins are not distinctly enlarged, still the natural condition of eczema is one of capillary enlargement, and the gentle compression of the bandage remedies this.

The rubber bandage, then, is applicable to and serviceable in a large share of the cases of ordinary eczema, it being more especially valuable in chronic cases, such as ordinarily resist all measures commonly employed. I have put it on when there was an acute or sub-acute inflammatory condition, and again when there was simply the infiltrated tissue left after an eczema, with no inflammatory phenomena, and with equally good results, as the cases narrated show. The bandage may, and often does, for a short time, sometimes for a longer period, cause an eruption of its own, namely, a few scattered minute pustules, running their course rapidly; but this need not interfere with its employment. If it is annoying, a cotton bandage or piece of thin linen, well fitted, may be placed beneath the rubber, but as a rule this is not required, for this condition will cease of itself under the continued use of the bandage.

Not less serviceable, if indeed not more valuable, will this plan of treatment be found in that very large mass of cases which are now suffering from long standing, uncured, and that otherwise almost incurable condition of ulcer of the leg. To these the solid rubber bandage is of almost universal application, and of well nigh certain efficacy. Indeed, Dr. Martin states that of many hundred cases to which he has applied it during the last twenty-five years, "all, without exception, have been perfectly and absolutely cured." A strong statement, but one which my judgment and experience leads me to accept as true. In thus speaking, it is not affirmed that every case to which every practitioner may give a rubber bandage will be cured; but, with due care, and a little experience in selecting the cases and applying the bandage, and with a proper instruction to the patient, and obedience to directions on his part, together with, at times, some other treatment which the individual case may demand, I believe that it will be possible for every one of my hearers to cure all of the cases which apply to them for relief. And this is a very important assertion when we remember the thousands of uncured cases now taking their weary journey through life, with that most distressing clog, an uncured ulcer of the leg. Those, of course, which are syphilitic in origin cannot be permanently cured thus, but even in these it is of considerable service.

In addition to these uses of the rubber bandage, it is useful in ordinary varicose veins, even where there is no skin lesion, and as it can be adjusted day by day to suit the condition of the parts, it is much more manageable and satisfactory to the patient than either the laced or elastic stocking, while its continual yielding and contraction render it far superior to the ordinary inelastic

cotton or flannel bandage. At first patients will complain of the heat, and of the retained perspiration, but after a few days these will cease to give annoyance, and the comfort of the bandage will be appreciated.

Some of the cases I have given show the value of this method of treatment in ulcerations from other causes, as burns, etc., and the results in these cases are so striking as to leave no doubt of the very general applicability of this form of dressing, where protection, support, and pressure are required.

I have not had opportunity of testing the rubber bandage in other conditions, but, as suggestions for those who may not have access to Dr. Martin's paper, I may mention the other uses to which he has put this method of treatment.

In injuries and diseases of the joints, particularly of the knee and ankle, it has been found especially serviceable. In ordinary sprains it gives the greatest relief, and the patient may with advantage take exercise, the rubber answering in place of the ruptured or strained ligaments.

In effusion into the synovial sacs Dr. M. has found the rubber bandage of the greatest service, also in distension of the bursæ mucosæ, as "house maid's knee." In this he has had perfect success in seven cases, the bandage being worn night and day for a month, the sac having been first thoroughly evacuated.

In œdema and anasarca of the limbs most perfect relief is afforded by this means. Dr. Martin has recently informed me that he has used this means with great service in phlebitis. Likewise in certain injuries of the bones, as in "green stick" fracture, the gentle, constant pressure of the elastic bandage over a splint has restored the normal condition.

In rheumatism and neuralgia about joints Dr. M. has found much benefit from the application of the rubber bandage, the warmth, moisture and pressure causing absorption of effused matter.

In regard to other conditions of the skin in which the rubber bandage might do well, I may mention psoriasis, exfoliative pemphigus, pityriasis rubra, xerosis, ichthyosis, lichen ruber, pruritus, true prurigo, elephantiasis Arabum, etc.

Third. A few words may be added as to the method of applying the bandage: the first care to be exercised is that it be not too tight, for it is possible by means of it to force all the blood out of the limb, and quite check the circulation, as when employed in Esmarch's bloodless operations. Ordinarily it need be drawn only just tight enough to perceive that there is the slightest possible stretching of the rubber, no more. The bandages should be applied from the toes, and with a little care they can be made to fit the limb perfectly with but little stretching, and they need never be "reversed," as in bandaging with cotton or flannel bandages; the heel as a rule need not be covered. I always apply them myself first, and have the patient watch very carefully, taking pains to give a little instruction as I make the turns, and

I find that even more ignorant patients in dispensary practice can apply them afterwards very satisfactorily.

It is better to apply the bandage while the patient is in bed; that is, before he leaves it in the morning, and to remove it while in bed, after undressing, and I direct patients not to put the foot to the floor without the bandage. On taking it off at night, the rubber is to be immersed at once in water, and if the odor is very fetid, the water may contain thymol (1:1000), or a small proportion of carbolic acid. The leg is then to be washed off with lukewarm water and dried carefully; if there is still a discharging, eczematous surface, it may be covered with cotton batting, and an ordinary roller bandage or other dressing applied for the night. If there is a raw, exuding ulcer, it may be covered with a rag and any mild protective ointment, as simple cerate, to prevent it adhering; this grease must be well removed by wiping, in the morning, before the application of the rubber bandage. After the leg is dressed for the night, the bandage is to be removed from the water, dried and hung up to air for the night; in the morning it is to be rolled up and applied while in bed, as before stated.

Sometimes I further aid the treatment by having the foot of the bedstead elevated with a couple of bricks, that the blood pressure of the limb may be lessened during the hours of sleep. If the leg is very hot and painful, much relief and benefit may be obtained by making cool applications outside of the bandage, as was done in Case XI.

A caution may be here given in regard to the removal of the bandage. In Case IX. it was left off on a very cold day, and the body was much exposed to cold, and, as a consequence, acute congestion of many parts of the skin of the leg occured, which nearly developed into eczema, but which happily yielded to prompt treatment; the tissues being softened by the rubber, and the sweat glands having been very active, the chill of the surface produced a congestion, which threatened serious trouble. In cold weather it might be prudent always to advise some extra protection to the limb for a while after leaving off the rubber bandage.

Care must also be exercised not to leave off the bandage too soon; indeed, it should be worn for a shorter or longer period after the eczema or ulcer is apparently well; when there are varicose veins the patients are very willing and desirious of continuing the application on account of the constant sense of relief experienced.

A very important point to bear in mind in relation to this method of treatment is, that as a rule, if the bandage is well applied, walking and exercise is a benefit rather than a drawback. In Case II., the patient with sub-acute eczema walked six miles a few days after the application; and Case XV., with a very painful ulcer, rose immediately from bed and walked several miles on the following day, remaining on his feet working, until cured.

Thus far, I have said nothing in regard to cases to which this

method is not applicable, and for the reason that such cases have not yet presented themselves to me. Undoubtedly, cases will occur where the rubber bandage cannot be borne, and this side of the subject remains to be yet developed. I can only say that I have absolutely no negative experience to offer.

A word in reference to other or previous mention of the use of rubber tissue in the treatment of skin lesions. The only suggestion of its use at all similar to this of Dr. Martin's, is by Dr. Turney*, of Circleville, Ohio, who reported having treated seven cases of ulcer of the leg with the application of an Esmarch bandage wound very tight, "as long as it could be borne," (for ten or fifteen minutes) each day. Six of the cases were cured, the seventh one disappeared before the cure was completed; one of the cases was in a woman eighty-five years old, in whom the ulcer had existed for fifteen years. It will be seen that the *idea* in this was quite different from that of the continuous, lightly applied rubber bandage, as described in this paper.

In 1869, Hebra†, made a report on the treatment of certain skin lesions with vulcanized rubber cloth, which he had employed on the suggestion of Hardy, of Paris, made in 1867. In this he reports a certain amount of good results in eczema, and considerable benefit in pruritus and in diseases exhibiting epidermal thickening. But the applications of rubber here suggested are quite and entirely different from those I have described; the applications of Hardy and Hebra were made of rubber *cloth*, totally inelastic, and the element of pressure and support to the part are entirely wanting; whereas, the bandages here described are of pure, solid rubber, are extremely elastic, and the pressure and support afforded by them is an all-important element in the treatment.

I have used the impervious dressings as advised by Hebra, and have had some most excellent results in eczema of the hands from wearing rubber gloves, that is, of rubber cloth. I have also tried the impervious dressings on eczema elsewhere, but have never obtained results on the legs which satisfied me; whereas, with the rubber bandage as here described, the results have far surpassed my expectation.

More recently, Mr. Balmanno Squire‡, of London, has advocated rubber suits of clothing in psoriasis, and has reported some cases in which the eruption was removed in a remarkably short space of time. But this again is but a development of the method of Hardy and Hebra, the suits are made of rubber *cloth* and there is no pressure exercised.

I have made these references because some, who may have tried the simple application of rubber cloth, or who have even

* *London Practitioner*, May, 1876, page 367.
† *Archiv für Dermatologie und Syphilis*, 1869, page 1.
‡ *British Medical Journal*, Vol. I., 1876, pp. 311 and 586, and Vol. II., 1876, p. 43.

bound it on firmly with a roller bandage, and who have not had good results, might be led to think that the same might be expected from the method advocated in this paper. To these I can only say that there is the greatest difference imaginable between the firm, resisting, non-elastic cotton bandage, and that of soft, pliable rubber, which yields with every motion and yet exercises its ceaseless pressure and support, to an extent which can be regulated to the utmost nicety, with each day's changing condition of the part.

ON THE SO-CALLED

ECZEMA MARGINATUM OF HEBRA

(Tinea Circinata Cruris)

AS OBSERVED IN AMERICA;

A CLINICAL STUDY

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ON THE SO-CALLED ECZEMA MARGINATUM OF HEBRA (*TINEA TRICHOPHYTINA CRURIS*), AS OBSERVED IN AMERICA—A CLINICAL STUDY.

(Read at the First Annual Meeting of the American Dermatological Association, September 4th, 1877.)

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That there is a parasitic disease of the skin which shows individual characters, dependent on its peculiar location upon the thighs near the groin, there is no longer any doubt. The subject was thoroughly studied and discussed several years ago by Bärensprung, Hebra, Köbner, Pick and Anderson, and certain quite definite conclusions arrived at, which have been accepted by the majority of recent observers. It is my desire, in the present paper, to call attention to the disease as it occurs in this country, where it is not very infrequent, confirming the descriptions of others, as far as relates to the ap-

pearance of the eruption in New York city, where, however, it presents features very much less marked and severe, in many instances, than those described by writers in other countries; for I am not aware that it has ever been particularly touched upon by an American writer. I desire also to urge a plan of treatment which has been universally successful in my hands, but which is little known and hardly alluded to in the text-books.

This eruption was fully described in 1855 by Bärensprung[1], who found a parasite in all his cases, and who named the disease *herpes inguinum;* it must be mentioned that Devergie, in the preceding year[2] had mentioned it very briefly as a variety of herpes circinatus, or ringworm of the body. In 1860, five years after Bärensprung, Hebra, in the first edition of his book[3], gives exactly the same clinical picture under the name circumscribed eczema (das umschriebene eczem), or *eczema marginatum*, claiming that it is simply a variety of eczema; and this name, eczema marginatum, has since clung to the disease. Bärensprung was right in his perception of the true nature of the eruption and Hebra was wrong; the former died soon after and his description was forgotten, and the error in regard to it was not finally cleared up until nearly ten years later, when, after investigations by Pick[4], Hebra himself[5] ac-acknowledged the existence of a parasite, and afterwards, in the second edition of his book[6], he described it as *eczema marginatum parasitarium*, still treating of it as a variety of

1. Annalen des Charite Krankenhauses zu Berlin, VI Jahrg. Heft I., 1855, p. 150.

2. Devergie—Traité Pratique des Maladies de la peau, Paris, 1854, p. 274.

3. Handb. des Speciellen Pathol. und Therap. Virchow, Band. III, Hebra, 1860, p. 361.

4. Archiv. für Dermatologie und Syph., Vol. I., 1869, pp. 61 and 443.

5. Archiv. für Derm. und Syph., Vol. I, 1869, p. 163.

6. Lehrbuch der Hautkrankheiten, Zweite Auflage, Erlangen, 1874, Band. I, p. 485.

eczema. It may be added, however, that Köbner[1], in 1864, had found a parasite in eczema marginatum, had inoculated himself from it, and had, furthermore, claimed that the disease was but a herpes tonsurans of these parts; to this Hebra answered that the disease which he called eczema marginatum was a different affair, and that there was no fungus in it. This seemed to settle the question, until it was successfully re-opened by Pick in 1869, as before stated.

To show that the same affection was intended by each of these writers, as well as to furnish a means of comparison with the disease as observed here, I will briefly quote their descriptions:

Bärensprung says:[2] "There is an affection which has been generally known as hemorrhoidal erythema or eczema, which, although very common, has found hardly any mention in dermatological works. According to my experience, it is more common in men than women, and, as it appears commonly during the middle period of life, it is generally looked upon as a consequence of hemorrhoidal disturbances. It appears mostly in a limited area, embracing the external genital region and the anus, and is accompanied by a more or less severe itching. It occupies, by preference, that portion of the skin on the inner sides of the upper portion of both thighs which is in contact with the scrotum, and therefore almost always appears as if caused by pressure of the scrotum; it often extends on to the mons veneris, occupies the perineum and the region of the anus, and even the skin of the scrotum and penis itself.

"The diseased surface is sharply bounded by a curved or irregularly bent line, and the skin enclosed by it is red and rough, in many cases so dry that the disease resembles an erythema or a pityriasis; in other cases it appears excoriated, and to a certain degree moist. In still other cases the border is covered with small vesicles, or even small pustules, which

1. Klinische und exper. Mittheilungen aus der Derm. u. Syph., Erlangen, 1864, p. 6.

2. Annalen des Charite Krankenhauses zu Berlin, Bd. VI, 1855; Heft I, p. 150.

pour out a watery fluid which dries to thin crusts. In cases of this kind the accompanying itching is very severe, and the eruption appears more as an eczema or an eczema impetiginodes.

"The following are the grounds upon which," continues he, "I hold that this affection is essentially identical with the hitherto described forms of herpetic disease, and on which I class it as a herpes" (he meaning thereby our present *tinea circinata*):

"1. In all the cases I have found, in the epidermal scales and debris scraped from the affected portions, a vegetable parasite, that is, a branched and jointed mycelium which agrees perfectly with that found in the other forms. This vegetates in the superficial as well as in the deeper layers of the epidermis, in the root-sheath of the hairs, and attacks even the hairs themselves. I found the scrotal hairs brittle, and here and there filled with the neck-lace like threads of fungus, as seen in the hairs of the head in herpes tonsurans.

"2. The affection appears as a purely local one; it is not connected with any general disturbances, and is cured rapidly by the employment of purely local measures, and that without any injury to the general health.

"3. The disease has the same peripheral mode of extension as have the other herpetic affections.

"4. The disease appears in many cases to be communicated by contagion."

Without commenting on this for the present, other than to say that Bärensprung proceeds to detail a number of cases which furnish most perfect clinical corroboration of the above, I will at once quote Hebra's description, as it appeared in the first edition of his book in 1860[1], or fully five years after Bärensprung has published his article; Hebra's description is given without the slightest reference to the latter.

Hebra says, "By the designation eczema marginatum I indicate a peculiar form of eczema, which is separate and distinct from all other varieties of the disease, by its constant localization on the inner surfaces of the thighs, on the mons

1. Hebra, Acute Exantheme und Hautkrankheiten, 1860, p. 361.

veneris, and on the buttocks, by its peripheral extension and simultaneous clearing up of the center, by the distinct limitation of the periphery of the affected portions by an elevated line, on which the phenomena of eczema are especially developed, and finally by its almost exclusive occurrence in men, especially in shoemakers." "It always begins on the inner surface of the thigh, in men where the scrotum touches it, generally on the left side, there first appears a small, round, elevated spot which itches, is scratched and small punctate excoriations are seen. Shortly the center pales, so that only the red border is visible. Here we see sometimes papules, sometimes vesicles, sometimes excoriations, and later, in consequence of the drying of the exudation and the blood extravasated by scratching, small brown or black crusts are seen. The disappearance of the eczematous appearances in the center corresponds to the peripheral spreading of the disease, so that the originally small spot increases to the size of the hand. When it occupies this extent the central portions show considerable pigmentation, and the whole affected surface contrasts strongly with the healthy skin. Here and there in the central pigmented portion, single, small punctate, new developments of the eczema are seen, but the principal eczematous phenomena are observed on the outer edge." * * * * "The eczema seldom remains confined to the originally affected surface of the thigh; it generally spreads to the immediate neighborhood by the new development of the round patches, increasing to circles, or, the other thigh is affected symmetrically, the eruption gradually extending above, below, and behind, until, in untreated cases of long standing, the disease may reach to the navel, down to the knees and cover the buttocks." Hebra has also seen it extend to the back, breast, and neck, and once, on a female, even to the extremities.

Hebra at first questioned if this eruption were not an eczema modified by syphilis, but there is no mention in the first edition of his book of a suggestion occurring to his mind that it might be due to a parasite, which is a source of wonderment, considering how closely his clinical description corres-

ponds with that of the behaviour of the vegetable parasitic eruptions, bearing in mind also Bärensprung's observations published five years previously.

There can then be no doubt that Bärensprung and Hebra were giving an account of the same affection, indeed the description of the latter seems almost as if taken from that of the former, so minutely do they describe the same appearances, in much the same words, a striking instance of the accuracy of the two brilliant clinicians, as Hebra does not seem to have seen the article of Bärensprung. In the second edition of his work he does refer to Bärensprung, not, however, to the description just quoted, but to a second article published in 1862, that is, *after* his own description had appeared; in this second article by Bärensprung the same disease is alluded to under the term "erythrasma," to which less than a dozen short lines are given. The object of this diversion is to give the credit to Bärensprung, to whom it belongs, as being the first to accurately and carefully describe the disease under consideration, he giving to it a name, herpes inguinum, which indicated its true nature (for by "herpes" Bärensprung and others of his time and later understood a vegetable parasitic disease, as it is now recognized to be); while the name eczema maginatum signifies nothing.

It is equally evident that Köbner in the work before referred to, intended the same affection, the clinical details of the first of his cases answering so perfectly to those given by Bärensprung and Hebra that it is needless to reproduce them here.

Finally, a number of Pick's cases were observed in the wards of Professor Hebra, and the diagnosis of eczema marginatum was made by him before Pick demonstrated the presence of the fungus parasite in them; their description, therefore, need not be given.

I cannot, however, forbear quoting here Devergie's brief description of the same eruption, written, as mentioned, in 1854, or the year before Bärensprung's article appeared, and six years before Hebra. Devergie, like Bärensprung, also classes it as a herpes; with herpes circinatus and herpes ton-

surans, but he was not familar with the microscopic parasite, except by hearsay in regard to herpes tonsurans, and he does not suggest its existence in the affection under consideration.

Says he, [1] "There is one variety which is very commonly observed on the upper and inner surface of the thigh, in the neighborhood of the scrotum; it is a sort of a herpes circinatus in which the vesicles are more apparent and more secretory, and at the same time cause more burning and heat than is observed in the other varieties. The affection may readily be mistaken for intertrigo, for the contact of the scrotum with the thighs develops both affections. The existence of a circular, raised margin in this eruption, and its absence in intertrigo, distinguish the two affections apart, as does also the more abundant secretion in intertrigo. Herpes is a rebellious malady, in most cases easily reproduced."

To complete the bibliography of this discussion, mention should be made of the fact that McCall Anderson [2] in 1868 recognized and demonstrated the parasitic nature of this disease, and his description, as also his cases, answer in every way to the features of the disease as already detailed.

As illustrative of the clinical features of the eruption in this country, I will mention briefly twelve cases, of which I have full notes, all of which except two occurred in private practice, and in ten of which microscopic examinations were made, revealing the presence of the parasite in every instance.

Case I. A well known physician in New York aged, about 38, has worn a suspensory bandage for a varicocele for years; occasionally there has been some chafing of the thigh from it, but no serious skin trouble resulted until one month before his visit to me. He then noticed a small circular spot with well defined edges on the upper and inner surface of the left thigh, which continued to increase in size and to give more and more annoyance by its itching until he came under my care.

When first seen there were two rings, not circular, on the inner surface of the thigh, where the scrotum rested against

1. Devergie—Traité pratique des maladies de la Peau, Paris 1854, p. 274.
2. On the parasitic affections of the skin, London, 1868, 2d. edition p. 76.

it: one of them was about an inch in diameter, and the other one and a quarter by two inches. They were healed in the center, leaving a brownish and rather mottled skin, from which scales could be easily raised by moderate scraping. The margins of the eruption were very clearly defined, of a moderately active red color, composed in part of separated papules, but in the main the margin was unbroken; it was rapidly extending, leaving a cleared surface behind. This margin was distinctly, although very slightly, elevated. The side of the scrotum, (which lay against this surface in the night, unprotected by the suspensory) was red, itchy and presented some papules, which also could easily furnish scales on scraping.

Removing the scales and placing them in liquor potassæ and glycerine, on the slide of a microscope, magnifying two hundred and fifty diameters, they were found to present the mycelium and sporules of a fungus growth in great abundance, which resembled mainly the trichophyton tonsurans.

Sulphurous acid alone was prescribed, with directions to bathe and rub the parts freely with it, using it as strong as it was possible to procure it. The relief afforded was instantaneous and perfect, the language of the patient at the next visit being as follows: "You can hardly appreciate the exquisite relief given by the sulphurous acid when the itching comes on; it is perfect." Five days after the first application the margins of the eruption were still very well defined, much less elevated and with yet some scaling; the disease which had been rapidly spreading was completely arrested. Three weeks later, when last seen, the eruption on the thigh was well, the scrotum was still red, and covered with a glossy coating of cuticle, already separating, which had resulted from the too severe application of the sulphurous acid. From a letter still later, I learned that the eruption was cured at the end of one month from the first visit.

Case II. A. K. C., a large and somewhat fleshy gentleman, aged 30, first noticed a ring on the inside of the right thigh about three or four weeks before his first visit to me. On the following week a patch appeared on the opposite thigh, both of them being where the scrotum lies on the part. About

the same time or shortly after, he found an eruption in both axillæ. He attributed the disease, with much probability, to a contagion acquired in Mexico, whence he had just returned, he saying that the filth of the country was such as to engender such diseases; he stated that it was a common custom there for the natives to wear the clothing of strangers sent to be washed, for a period before returning them; the clothes would often be retained thus two or three weeks before they could be gotten back.

When first seen the following conditions were recorded: On the right thigh was a very distinct ring, with a clearly defined margin, red, and slightly raised, of a line or two in breadth. The center of the patch, which was irregularly shaped and about four inches in diameter, was dry, of a dirty brown color, and slightly scaly, contrasting strikingly with the sharply cut margin; around the outside of the patch were a number of separate and isolated papules, flat and of a reddish color. On the left thigh there was a similar patch, but of much less extent. In the axillæ the eruption presented the usual appearances of ringworm of the body, and no other portions were attacked except those here mentioned; in the right axilla the disease occupied an area of about two inches in diameter; in the left axilla there was one small circle, about three-quarters of an inch in diameter.

The microscopic examination of the scales scraped from the margin showed a moderate amount of fairly luxuriant mycelium, and an abundance of spores. Sulphurous acid was ordered to be freely applied in full strength, and six weeks later he was next seen, after returning from a trip South, as purser of the Havana steamer. He reported that the first application of the acid checked the eruption and arrested the itching at once, all of the cutaneous lesions disappearing entirely for a time. He then exhausted his supply of sulphurous acid, and had had none for twelve days, and the eruption had spread very luxuriantly during that time, especially during the last four days, which had been very warm and damp. There was now seen a large circle around the anus, occupying all the soft portion between the buttocks, with the same clearly defined, slightly

prominent, red margin, and the dirty, yellowish-brown centre. It had also increased materially on the left thigh, and there was also the same on the left side of the penis and scrotum; under the arms the tinea was spreading, and on the right side of the neck there was a small, typical ringworm. The eruption about the anus was scraped, and the parasite found in the scales.

At a later date, two or three other spots of tinea circinata were seen; one on the left leg, near the ankle, and two on the left thigh, elsewhere than where the eczema marginatum existed in the crotch. As an adjuvant to the sulphurous acid, he was ordered the compound tincture of green soap, and an ointment of turpeth mineral, fifteen grains to the ounce, to be kept applied at night; it was to be washed off and the acid applied in the morning. Six days from the second visit the eruption had lost all of its distinctive characteristics; there was no more itching, and he went to sea again, apparently cured. He was directed to continue the use of the acid for a season, to prevent a relapse again.

Case III. J. E. S., aged thirty-five, was brought to me by his physician, during the intense heat of August, 1876, suffering terribly from what appeared to be an ordinary eczema of the whole region of the penis, scrotum, anus and abdomen. His history was, that he had had an eruption on these parts for at least three years, varying with the season and treatment, at one time better at another worse. He was also said to have had eczema of the ears five years or more ago, the remains of which had hung on ever since, in the way of scaling and some itching; he had also had what appeared to be eczema tarsi for a long time.

He was placed upon a treatment for his eczema of the genital region, consisting of alkaline and starch baths, dilute tar wash, followed by mild zinc ointment, and laxatives and alkalies. Very great relief was obtained, and, with certain other adjuvants, the case progressed very well, so that by the end of two weeks all, or most of the soreness was gone, the surfaces were dry, and the patient was quite comfortable. But still the disease seemed to remain in some localities, and resist various

stimulant measures for eczema, although by constant employment of remedies, he was comparatively free from annoyance.

After all acute symptoms had long disappeared, two months and a half after his first visit, on examining the parts very carefully, or rather on taking a general look at the affected surface from a little distance, I noticed that there was a distinct red margin on both thighs, slightly raised, and of a color which contrasted strongly with the surrounding healthy tissues, and also with the skin enclosed by it, which was of a brownish-yellow. Placing some of the scales scraped off, beneath the microscope, they were found to be loaded with the mycelium and spores of a vegetable parasite; and certain hairs which were included in the specimen, were affected as in tinea tonsurans. This led to an investigation of the ear disease; and the scales taken from the auditory canal were examined, and found to contain fungus in abundance, the mycelium quite predominating, branching, often with enlargements and knobbed ends. In comparing the parasite with that seen in a fresh case of tinea tonsurans on the head of a child, which by good fortune appeared at the office on the same day, all the elements were found to be much smaller than those of the trichophyton, and corresponded more to the aspergillus. An examination of scaly crusts removed from the eyelids, showed also the presence of a parasite.

Here, then, we had the explanation of the chronicity both of the ear and eye trouble, and of that about the thighs. They had gotten better for a time under treatment for several years past, but the disease ever relapsed when not actively combatted, so that the patient, even when he considered himself comparatively well, had never been free from annoyance from the itching in the ears and about the thighs, and at times the distress had been very great. There had been the constant presence of the vegetable growths, which remained quiescent much of the time, but which always caused some irritation, and, when occasion invited, gave rise to much trouble. There can be little doubt but that the acute eczema of the penis, scrotum, and thighs, with which I saw him first, was the result of scratching; and when the irritation was, in a measure,

relieved and scratching forbidden and prevented, the parts subsided to their chronic state in which the parasite was afterwards found.

Sulphurous acid was given him, when the parasitic nature of the affection was discovered, to be freely applied in full strength, and three days later it was recorded that there was very great change in the appearance of the thighs; all the marginated character of the eruption was gone. He had thought that there was comparatively little annoyance given by the disease at the previous visit, as it had been only what he had borne for several years, but on this occasion he expressed the greatest relief from that incessant irritation which had made him always conscious of the presence of the disease; the difference between his expressions before and after the use of the sulphurous acid was remarkable; he repeated so many times that he had experienced the greatest relief from it.

He was also ordered sulphurous acid, diluted with an equal part of glycerine, to be painted in the ear, and six days after its use it was noted that the ears were better than they had been for years. The eyes were bathed with a weak solution of soda, and a weak red precipitate ointment was used, to their great benefit.

There were some changes made in the treatment of the thighs, from time to time; occasionally the sulphurous acid would prove too severe, and an acute irritation would require other treatment for a while, but in the main the acid was persisted in, and at the end of about three months it was recorded that the thighs were entirely well; that the ears, which had given trouble incessantly for four or five years, were perfectly healthy, and that the eyes were in better condition than for many years. For the latter he wore glasses to correct an error in acccommodation, as suggested by Dr. Roosa, who saw the case with me and assisted in the treatment given to the eyelids and ears, concurring in regard to the parasitic nature of the eruption in these localities.

I may add that a number of times during the treatment of the case scales were scraped from the diseased surfaces, and the

vegetable parasite was repeatedly found; also that in one axilla there was a quite distinct ringworm, of ordinary appearance. One more feature in reference to the eruption about the thighs was the occasional development of the same, sharply defined, flat, dull red papules of varying size, just outside of the ring of the so-called eczema marginatum, as was mentioned to occur in the first case, and occasionally the same within the area which had been passed over by the disease. These, as in the other cases, were considered to be new exhibitions of the parasite, and more assiduous application of the sulphurous acid caused their disappearance.

This patient remains under observation from time to time; I saw him socially a few weeks since, and continues free from the eruption which had annoyed him for years, the true nature of which had never before been suspected.

Case IV. Dr. Y., aged about 33, a physician of a neighboring city, consulted me in reference to an eruption which had existed a long while on the upper and internal surface of the right thigh. There was then a patch five or six inches long by one and a half to two inches wide, corresponding to the surface of contact of the scrotum and thigh. The margin of the surface was very sharply defined, being of a decided red color and slightly raised, with some outlying papules possessing the same features. The center of the patch was also somewhat reddened, the tissue slightly thickened and a moderate amount of scaling present, which could easily be increased by scraping. Microscopic examination showed abundance of spores filling the field, with some mycelial threads.

The history was that he had had irritation in this locality for several years, during which time he has had boils and carbuncular swellings on the scrotum; he has never been free from irritation and an eruption in this region, he says, for twelve years, although from his extreme cleanliness the disease has been kept within its present boundaries. The itching from it at times has been intense.

Sulphurous acid was advised to be freely applied, and by a letter I learned that it was followed with apparent benefit, but was discontinued after a few days in consequence of the dis-

tress to the respiratory passages caused by the fumes which arose from it. I have not seen him since, but he promised again to try the acid and report.

Case V. M. H. D., aged 29, presented the most marked example of a general eruption of tinea circinata which I have ever met with, and with it he had the marginated eruption about the genito-crural region. He had had the eruption for at least three years, and from the description of the case, recorded several years ago, it appears to have spread from below upwards, appearing first on the lower limbs. It had been located in the genital region for about two years previous to his visit; about a year after this it reached the neck, soon appeared on the face, and lastly on the left hand.

At his first visit the condition was noted as follows: The larger part of the body is covered with an eruption consisting of somewhat elevated, reddened circles, enclosing brownish-yellow, desquamating surfaces. Many of the circles are irregular, and in some instances quite broken, but the scaly surface exists almost everywhere, with occasional islands of unaffected tissue. The eruption really extends from the sole to the head, the face and neck having many ordinary ringworms upon them; the eruption had not extended into the hairy scalp except very slightly at the back of the neck, where the hairs were stumpy.

About the genital region the eruption possessed the characters described in the former cases of eczema marginatum—that is, on the sides of the thighs adjoining the scrotum were circles of reddened and slightly raised tissue, with moderate tendency to moisture, enclosing a brownish-yellow surface, slightly roughened. The itching and general irritation from the eruption was terrible; the patient walked around the office incessantly, being unable to sit long on account of the soreness of the buttocks from the disease.

His wife and children, he said, had all had attacks of ring worm.

Microscopic examination of the scales scraped from a number of places showed them to be loaded with the mycelium and spores of the trichophyton tonsurans, and the examination was

repeated at a number of successive visits, always with the result of finding an abundance of the parasite. This was the first time the scales had ever been thus examined by a physician, and this the first suggestion of the true nature of the affection, although he had suffered from it for several years and had seen a number of physicians.

He was placed upon the pure sulphurous acid, to be freely applied, and in less than three weeks it was noted that the entire skin was nearly free from eruption. With the increase of warm weather in August the disease seemed to gain headway and again to give great annoyance; he was then ordered to use sulphurous vapor baths, several times weekly, and to continue the acid. By September 1st the baths had cleansed the skin greatly, but in spite of all treatment the parasite was still discovered in abundance by December 10th.

One year from the first visit he called to report that the eruption was about gone, there being, however, still a little on the neck, buttocks, feet, and left hand. He was in excellent spirits, the relief from the itching being very great; he was persisting in the use of the sulphurous acid and wished no other remedy to conquer the disease. That portion about the genitals ceased to give trouble very early in the treatment.

Case VI. M., aged about thirty, for four years had an itching eruption at the upper portion of the thighs and in the crotch; it commenced after the repeated use of Turkish baths for several months, and had continued to spread ever since, the itching has been very great.

When examined the inner surface of both thighs for a distance of about six inches from the crotch, was the seat of a brownish, dry, scaly eruption, with a well defined, reddened edge; the eruption extended back, well on to the buttocks. The condition of the scrotum was not noted. Examination with the microscope of scales scraped from it showed the abundant presence of fungus. He was placed upon sulphurous acid, but was seen only once and the result is not known.

Case VII. Mr. T. V. C., aged 54, first noticed a small red spot on the inside of the left thigh, where the scrotum touches it, four weeks previous to his visit to me. This continued to

increase circumferentially, and other small circles appeared and developed, coalescing with the first one until his visit. It was recorded then that on the inside of the left thigh there was a patch of eruption about the size of the palm of a large hand, the center of which was healing, and the margin was distinctly defined and a little elevated. On the same side of the scrotum an exactly corresponding eruption was seen, the center of which was reddened and slightly scaly, and the margin was sharply cut, of a bright red, and moderately elevated. On the inside of the right thigh a single smaller spot had developed, and on that side of the scrotum the same was seen, in such a position that when the latter was allowed to rest on the thigh the two diseased spots exactly matched.

A microscopic examination of scales scraped mainly from the left side, revealed the mycelium and spores of a vegetable parasite, quite abundant.

He also was placed on sulphurous acid, which produced an immediate amelioration of the symptoms, but the skin proved very delicate and sensitive to the acid, and it was necessary repeatedly to suspend its use and adopt more soothing measures. There was also a considerable tendency to the development of boils in this case but the ultimate results were satisfactory.

Case VIII. H. F., a large and rather fat German, fifty years old, appeared at Dr. Draper's Skin Clinic at the College of Physicians and Surgeons, on January 15th, 1877, for the relief of an eruption about the thighs and genitals. During my absence the following remedies were prescribed by one of the assistants, on the diagnosis of ordinary eczema, namely: two compound cathartic pills every second night, thirty grains of acetate of potassa, thrice daily, and the following ointment: ℞. olei cadini ℥ij, pulv. camphoræ ℥iss, ung. simplicis ℥iss, glycerine ℥ss, M., to be well applied.

Two weeks after his first visit I saw him, and he reported that there had been no relief to the terrific itching which had so long distressed him. I then learned that the eruption was of several years duration, and had never yielded to any treatment, although he had been constantly under medical care.

His history is as follows : for ten or twelve years he has had chafing at the crotch during the hot weather, it going away with or without treatment on the approach of cooler weather (during about the same length of time he has become much more fleshy than previously). The present eruption did not begin, as the preceding, with warm weather, but, after the chafing of warm weather had ceased, in October, 1876, and increased instead of diminishing with the advent of cooler weather. At this date he first noticed an eruption on the upper part of the thighs, which gradually increased in severity under treatment until the date of his visit. The itching which he had endured he described as terrible, entirely depriving him of sleep; he would frequently get up in the middle of the night and walk several miles, and the parts bore testimony to his sufferings in the inflamed and irritated surface caused by his continual frictions.

When first seen the eruption resembled that in the cases already described, in many important particulars, but also presented points of difference. Both thighs at their upper and inner surface, to the crotch, were the seat of a red eruption, the outer portions more elevated than the inner, and the margins very well defined, and ended abruptly in healthy skin; there was no gradual shading into healthy tissue as in eczema. Around the outside of the principal portion were several smaller spots of disease of various sizes, from that of a pin's head to a third of an inch in diameter ; at late periods of the case there were more of these flat, out-lying papules, which I have recorded as existing in many of the other cases. The color of the affected surfaces was of a rather dusky red, the outer portions of a higher color than those toward the center ; the surfaces were moist, but this was largely from perspiration, as the surface could hardly be called a weeping one as in moist eczema. The sides of the scrotum were red and itchy. He also had chronic eczema on other parts of the body, behind the ears and on the hands.

The scales, scraped from the surface of the thighs, were examined and found to contain both mycelium and spores of a parasite abundantly, and the patient was placed upon the free

external use of sulphurous acid. At the next visit, one week later, February 5th, I recorded that there had been a very manifest change in the appearance of the eruption, it had lost much of the elevated distinctness of its border, and, while it had been spreading rapidly before treatment, all advance had been arrested completely. But the statements of the patient afforded the most satisfactory proof of the correctness of the diagnosis. As before stated, he had not slept for more than two months previous to his visit; that night, after a thorough application of the sulphurous acid, he rested, sleeping all night, and had continued to experience the same relief up to the time of the note at the second visit.

To conclude the history of this case, he continued to improve week by week as my repeated notes show, until on March 5th, the marginated appearance was about gone, there was only a moderate redness of the parts, and no itching. On April 16th hardly any trace of the former difficulty remained. I have seen him on repeated occasions since, even during the present month of August, and he remains entirely free from his eruption; morever, this summer he has not even experienced the chafing which distressed him during previous warm seasons. From first to last he used only the sulphurous acid, no other remedy was necessary, and at no time was there any irritation of the skin requiring its cessation, as in several of the other cases.

Inasmuch as there was some little difference of opinion among some gentlemen who saw this case, I examined the scales from the surface several times, always with the result of finding more or less of the parasitic elements, until they had been removed by treatment. I also submitted some of the scales to my friend Dr. Heitzmann, who agreed with me in the existence of the parasite, and also as to the nature of the disease.

Case IX. Rev. Mr. B., aged about 40, has for several years suffered more or less from an eruption about the thighs and genitals, which has caused him to scratch much of the time, or rather has given an uneasy sensation which calls imperatively for scratching. On the inside of the right thigh was

seen a reddish patch, three or four inches in diameter, bounded by an irregularly curved border, more reddened than the rest of the eruption, sharply lined toward the healthy tissue, the margin being decidedly more elevated than the central portion of the patch. On the left thigh, where the scrotum rested, was another smaller patch, possessing equally distinct characteristics. The surfaces were slightly scaly and on scraping them a fungus was found by the microscope to be present in a very easily appreciable amount. I find it recorded that the parasite was not seen when first looked for, until the scales had been soaked a little while in liquor potassæ and glycerine.

Case X. W. E., aged 33, said that two months previous to his visit to me an eruption developed on the inside of the left thigh, which "looked like ringworm," was circular, red, slightly elevated, and itchy. It had continued to increase in size, giving much disturbance, until he was sent to me for treatment. When first seen there was considerable artificial eruption mingled with the parasite disease, which former had been caused by a bi-chloride of mercury wash which had previously been advised by another physician. There was still, however, sufficient of the marginated appearance already described to warrant the diagnosis, and a microscopic examination of the scales demonstrated a parasite.

The case was treated for a while as one of ordinary eczema of these parts, because of the amount of irritation present, and at a later date the sulphurous acid was employed as in the other cases. One month after his first visit, a small circular ringworm developed on the inside of the right thigh, red and slightly elevated; this, he says, corresponded very closely with those which first appeared.

Case XI. Mr. C. S. D., aged 47, was seen recently, and but once, and the results of treatment are not yet known. About a year since he noticed an itching behind, about the anus, and three or four months ago the region of the scrotum and thigh began to give him trouble. He has also an eczema of the palms which has existed four years, and at times given him great annoyance.

Examination showed the following state of the parts. Around

the arms a brownish, slightly roughened patch was seen, on both sides of the fold between the buttocks, limited externally by a distinctly drawn line of redder surface, which is slightly elevated and contrasts strongly with both the healthy skin and the enclosed brownish-yellow surface. On the left thigh, occupying a location corresponding to the place of contact of the scrotum, is a reddened surface of simple eczema, slightly moist, and without the marginated appearance; indeed, with the center of the patch more markedly affected than the periphery, a clinical sign, as we shall see, of some importance, pointing to an eczematous rather than a parasitic disease.

In this case also the parasite was found in the scales scraped from the region of the anus, upon careful microscopic examination, both spores and short mycelium. Sulphurous acid was ordered to the eruption about the anus, and other measures for the eczema existing elsewhere.

Case XII. A. B., a German woman, aged 36 years, was seen by me at the request of Dr. Hanks, in his room at the Demilt Dispensary, January 20th, 1877, and he kindly gave me the following notes of the case:—She had come to Dr. H. in August, 1876, for "an exceedingly troublesome and constant itching about the front passage, which had existed for six months or more. She was a stout, well-nourished woman, cleanly in her habits and person. On examination there was found an eruption covering the integument of the labia externa, perineum, and around the anus, showing frequent marks of the finger nails. The disease seemed to be very superficial, and the line of separation between healthy and unhealthy parts very marked. She was given benzoated oxide of zinc ointment with oil of cade, which gave no improvement, using also a vaginal wash of alum and chlorate of potash. An ointment of chloral and camphor, prescribed later, gave relief to the itching whenever applied, but at the end of several months the disease was about the same."

When I saw her, January 20th, the labia and to a slight extent the sides of the thigh, also the perineum, and the region of the anus were the seat of an eruption resembling the other cases of eczema marginatum here described. The area of dis-

ease was bounded by a very distinct margin, slighly raised, of a tolerably active red color, while within the surface was more of a yellowish-brown color, and not elevated as at the margin. The eruption extended around the anus, and as in the other cases the lines on the opposing soft parts of the buttocks corresponded exactly with each other in shape and contour.

I regret very much that the scales were not examined microscopically, but the clinical appearances were such that there was no doubt in my mind as to the parasitic nature of the eruption, and I therefore advised the free local use of sulphurous acid. Two weeks from that visit Dr. Hanks reports that the case was nearly well, and that she remained so, except around the anus, until a month or two ago, when she again complained; this time she had a crop of little boils, and more or less itching around the anus.

It is not my intention at the present time to attempt a complete study of this disease, with reference to the work of others; but I wish to bring forward these cases to illustrate the subject in some of its features as occurring in this country, for, unless familiar with it, the comparatively mild cases occurring here may escape attention, when they fail to present the severe features depicted by Hebra and described by others. I may add, that the cases here detailed do not constitute my entire experience in the disease, for each year I meet with a number of cases of it in public practice, of which I have no notes, and some of my cases in private practice may have been overlooked and I have the notes of a number of cases which I saw in the practice of the late Dr. H. D. Bulkley. The eruption is, undoubtedly, a somewhat rare one, but not nearly so rare, I believe, as some have thought it to be.

Diagnosis.—The only lesions which could be mistaken for *tinea trichophytina cruris*, the mis-called eczema marginatum, are eczema, intertrigo, and a serpiginous syphiloderm. The chief difficulty, of course, lies in the differentiation between simple eczema, or intertrigo, and the parasitic eruption, for the serpiginous papular eruption of syphilis needs only to be borne in mind, in this connection, to enable one to exclude it in any given case, with measurable ease. The microscope is,

undoubtedly, of the highest value in the diagnosis; but oftentimes the disease has been so altered by treatment, that the parasitic elements can no longer be recognized, or the microscope may not be accessible, and, in any case, dependence must be placed largely upon clinical features.

In my experience, the itching in this eruption is far out of proportion to its apparent extent and severity; a patch which would be thought to give but little annoyance, will drive the patient almost frantic in his restrained desire to scratch; moreover, scratching and rubbing does not appear to give the relief afforded by the same in eczema, the tickling returns sooner, and is less completely removed by mechanical irritation. Eczema about these parts generally attacks the scrotum more severely than the thighs, and is more commonly attended with thickening of tissues in the former; whereas, in the cases of tinea of this region, when the penis or scrotum are involved, there is little or no thickening, except, perhaps, to a very moderate degree on the well defined margin; and the tendency of the parasitic disease is to attack the thighs far more than the penis or scrotum.

In eczema of the genito-crural region, as in eczema elsewhere, the tendency to recovery is from without inwards, toward the centre of the patch, whereas in the parasitic eruption the centre always tends to clear up first, although there may appear new developments within the healed area. Eczema shades off in many instances almost imperceptibly into the surrounding healthy skin, while in the disease under consideration, the sharply defined border, oftentimes quite perceptibly raised, has a characteristic appearance which, when once seen and clearly recognized, may be looked for and observed in all cases of tinea cruris which have not been too much altered by treatment. The dirty yellowish-brown color of the inner portions which have been passed over by the disease, are peculiar to the eruption as distinguished from eczema.

It is granted, of course, that in individual cases the element of eczema so far predominates that the correct diagnosis may be entirely impossible for a season, even to the practiced eye.

Thus, in Case III of our series, when the patient first came under observation, all the features of the eruption were those of an ordinary, very greatly aggravated case of common eczema of all this region; and the disease yielded, up to a certain point, to remedies directed against the eczema alone; and it was not until two months and a half after his first visit, when all the acute symptoms had subsided, and he considered himself about well, that the parasitic element was discovered. In this case, however, I believe that the tinea cruris was the original trouble which had pestered him for years, at times causing him to get up a severe eczema by scratching.

What is true in differential diagnosis of this eruption from eczema, is more especially true between it and erythema, and the features need not be repeated for that disease.

In regard to the use of the microscope in studying cases of this disease, I do not think that the discovery of a vegetable parasite in the scales is always as easy a matter as it has been represented to be, nor should we, because we fail to find them in any one or two specimens scraped promiscuously from the affected surface, deny at once the parasitic nature of a case. That particular portion may be free from active vegetating elements, and yet contain seeds enough to cause it to break out again at a later period; also, we may not scrape deep enough, the outer layers in which it luxuriates most favorably may have been removed by treatment or by the cleanliness of the patient; or, again, the inflammatory phenomena may be so severe as to obscure the vision of the parasite, this is especially noticed by Kaposi.[1] This writer also gives, as far as I know, the only representation of the parasite growing in the deeper layers of the epidermis, even among the nucleated cells of the rete.

Neumann says,[2] "In an earlier stage of the disease, the fungus is almost always demonstrable; in inveterate cases it is absent as a rule." "In those cases where the infiltration is considerable, and the skin covered with scales and crusts, I

1. Hebra—Lehrbuch der Hautkrankheiten. Vol. II., p. 641.

2. Neumann—Lehrbuch der Hautkrankheiten. 4th edit. Vienna, 1876. p. 639.

could rarely find anything else besides micrococcus and bacterium, with which the epidermal cells were densely packed. It appears that in this, as in all skin diseases dependent on fungus, and having thereby much dried blood and pus, the mycelium gradually perishes, and the cells of bacterium and micrococcus gradually preponderate, from which no higher forms are ever developed."

In the majority of cases, however, presenting clearly the clinical features detailed in this paper, the parasite can be found and demonstrated, if sufficient care and patience is exercised. It may, perhaps, be necessary to allow the disease to remain for a season without treatment to allow the free growth of the mycelium in the outer layers of the epidermis. There is always danger of confounding external elements of fungus with those belonging to the specimen under consideration, and great care is necessary to avoid this. It is also well to bear in mind that the edges of epithelial cells often resemble mycelium, and that fat globules have repeatedly been mistaken for the spores of a fungus.

Etiology.—This leads to a consideration of the etiology of the disease. There is no doubt in my mind that it is frequently a combination of an eczema, pure and simple, or of an intertrigo, and a vegetable parasitic disease, in most instances the tinea trichophytina. I say in most instances, for I have seen cases of tinea versicolor, where the eruption extended as far down as the genital region, and where there were lesions resembling much the so-called eczema marginatum; and in Case III., before alluded to, the parasite appeared to be composed of finer elements than the trichophyton, and the co-incident occurrence of the parasitic disease of the ear, would point to the presence of the aspergillus in this case. I have once observed favus on the penis and scrotum, but it did not take the forms described in this paper, though I do not see why, if the person is a suitable subject, with an eczematous diathesis or tendency, this parasite might not luxuriate in the genital region, and give rise to the compound disease under consideration.

In a number of the cases here detailed, eczema existed else-

where on the patient, but, on the other hand, in case V., where the very general tinea circinata covered almost the whole body, those portions about the genital region partook of the characters of eczema marginatum without there being any eczematous feature elsewhere; the favoring elements of heat and moisture in the parts affected appear to be the most important factors in the disease, besides the parasite.

It is, therefore, difficult to determine in every case how far the parasitic disease, and how far the eczema or intertrigo are to blame for the existing lesion, it is difficult to say which came on the stage first; I am inclined to believe that very frequently the parasite plays the second part in the programme, but soon becomes a prime factor—that is, that there is first an eczema or intertrigo, or a congested and moist condition of the parts upon which the fungus finds its most congenial nest where it vegetates and soon obtains a foot-hold, which nothing that does not exercise a directly destructive influence on its life can remove. Thus, in Case I., the patient had worn a suspensory bandage for a varicocele for several years, from which there had long been more or less chafing, but no serious trouble occurred until the advent of the parasite, a month before his visit. In Case VIII., the patient had had chafing in the crotch for ten or twelve years every summer; this had, however, always disappeared on the advent of cold weather; but when the vegetable parasite found lodgment here, on this appropriate soil, it remained until destroyed by a parasiticide. On the other hand, in a number of the cases, the eruption had persisted for years with aggravations, the disease being kept in check by cleanliness or treatment, or both, the parasite existing there all the time as a permanent cause, as in Case III.; in such cases the variation in the effect is dependent upon the state of the general health, congestion of the hemorrhoidal vessels, heat, exercise, etc.

It will be thus seen how inappropriate is the term *eczema* marginatum, while the addition of the adjective *parasitarium* but heightens the difficulty. It is no more appropriate to speak of a parasitic eczema than it is to speak of a syphilitic eczema; eczema cannot be caused by a parasite or by syphilis.

Prognosis.—I do not think that the prognosis of this disease, in this country, is anything like as serious as it has been spoken of by those who have written of it as observed elsewhere. Our cases are milder and certainly do yield to intelligent treatment in a manner which is generally highly satisfactory to the physician and patient. There is need of caution, however, lest the treatment be discontinued too soon, for relapses will happen unless the disease is thoroughly eradicated. Nor need we wonder at this, considering the extreme minuteness of the germinating spores of the fungus and the possibility, nay probability, of one or more of them being overlooked, perhaps remaining on articles of clothing, giving thus, in reality, a new infection, a new case. Caution should be exercised, therefore, in pronouncing the patient cured before he has remained some months free from eruption.

It must be borne in mind when comparing these cases with the severe ones alluded to by Hebra, McCall Anderson, Fox, and others, that they were all but two of them in private practice, and those two were of very cleanly habits; when comparing the eruption with the severe forms observed in the East, as the Chinese, Burmese ringworm, etc., we recall that the element of a warm climate certainly has an effect in the development of these affections (as several of my cases were decidedly worse in warm weather), and that diseases of the skin as well as other diseases, certainly do present differences of type in different countries, although some have tried to insist that they do not.[1]

Treatment.—The cases here given were treated almost exclusively by the free external use of sulphurous acid, as strong as could be procured and used, and, judging from the histories given, nothing more could be desired. In every case it gave immediate relief to the itching, and produced a marked improvement in the appearance, and in some instances it was the only remedy employed from beginning to end, and sufficed entirely to remove the disease.

Some care is necessary in order to procure and use sulphur-

1. Dr. G. Thin on Eczema Marginatum, London Practitioner, July, 1875, and Jan. 1877.

ous acid strong enough. I have often seen recommendations of writers to employ it diluted in various strengths, but seldom have I found it necessary to weaken it any, even for delicate skins, while I constantly see it fail in its action from being too weak. I generally advise patients to buy an unopened bottle of Squibb's sulphurous acid, to open it carefully and fill a one ounce bottle, cork again quickly, and make all the applications from the smaller bottle, which is to be refilled as often as required. I am convinced that much of the sulphurous acid retailed in the shops is absolutely worthless, as the gas either has evaporated, leaving simply the distilled water, or the sulphurous acid held in solution in the water has partially undergone oxidation, returning to sulphuric acid in solution, which, in place of being beneficial, would be prejudicial to such an eruption as the one under consideration. It is necessary, then, to use freshly made acid which has been kept tightly corked, and as this has been my habit for several years, I seldom find difficulty in obtaining the results I desire from it in vegetable parasitic affections of the skin.

In regard to the mode and frequency of its use, I advise the parts to be well saturated with it two or three times a day, there is no harm in applying it much more frequently if it does not inflame the skin, indeed many patients resort to the application of it whenever the itching calls attention to the disease. When it appears to cause irritation it is to be suspended, and such remedies as zinc ointment, or a calamine lotion are to be employed for a time, and on returning to the sulphurous acid, a new and, if practicable, an unopened package, fresh from the manufacturer, should be employed, as possibly the irritation may have been caused by the *sulphuric* acid, developed in the former specimen.

I need hardly mention other methods of treatment which are familar to all. Anderson says he has had best results from the bi-chloride of mercury in solution (gr. ij. ad. ℥j.) ; others recommend ointments of turpeth mineral (gr. xv. ad. ℥j.), or dilute citrine ointment, as also oil of cade, oleum rusci, etc. Goa powder, or poh di bahia, or its derivative crysophanic acid, is a paraciticide of value, especially in this form of disease,

and is highly recommended by some. Hebra and Neumann treat this disease much as they would ordinary eczema of these parts, although recognizing its parasitic nature ; this I believe to be a great error, for while vigorous treatment may succeed in removing the disease mechanically, the results are far less rapid and satisfactory, in my experience, than those of a well directed anti-parasitic plan, and, on the other hand, I may say that most of my patients had been under judicious treatment for eczema with little or no avail, until the real nature of the affection was discovered, and it treated in the method described.

Hebra[1] recommends his modified Wilkinson's ointment (℞. sulph. flor. picis liquidæ, aa ℥iij. saponis viridis, unguent. simpl. aa ℥vi. cretæ prep. ℥ij. M.) to be rubbed in with a brush morning and night for six days, and the parts kept covered with flannel. The surface is not to be washed during this time, nor for three days afterwards; a bath is then taken. This treatment generally confines the patient to the house, or even to the bed ; when this cannot be done Hebra states that any other treatment must be mainly palliative, and must last for months. In the use of the sulphurous acid I have never seen the patient confined to bed, the treatment is measured generally by days or at least weeks, and not by months.

I have sometimes obtained considerable assistance from an occasional sulphur vapor bath, which, of course, is but a part of the sulphurous acid treatment, in the one instance the sulphur fumes being dissolved in water, in the other they are directly applied to the skin. I have not used sulphur otherwise, as in ointment, nor should I be disposed to try it from what I know of the disease.

(1.) Hebra—Lehrbuch der Hautkrankheiten—Erlangen 1874—Zweite Aufl. p. 493.

Clinical Reports.

CLINICAL ILLUSTRATIONS OF DISEASES OF THE SKIN.*

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V. **Tinea favosa.**—Synonymes: *Favus; Porrigo favosa; Crusted ringworm.* Having finished with the eruptions due to the presence of the *trichophyton tonsurans*, we come now to the single one produced by the growth, in the epidermis or hairs, of the vegetable parasite *achorion Schönleinii*, to which the name tinea favosa, or favus is given.

Favus is one of the comparatively rare diseases of the skin in this country, it occurring but forty-seven times out of 27,910 cases of miscellaneous skin diseases reported by the statistical committee of the American Dermatological Association. In other countries it is much more frequent, especially in Scotland, where Anderson reports 227 cases in 21,859 miscellaneous skin cases. It is probable, however, that the disease is much more common in this country than might be judged from the figures above given, inas-

* The very favorable reception which was accorded to the "Notes on the Local Treatment of certain Diseases of the Skin," until most of the diseases which are at all common were gone over, in previous issues of the ARCHIVES, leads the editor to continue this plan of serial writing for general practitioners in the way of "Clinical Illustrations of Diseases of the Skin." It is intended in these to give plain and practical comments on dermatological topics based on illustrative cases taken from private and public practice, some of the matter at times being that delivered in clinical lectures at the New York Hospital. The diseases will, as far as practicable, be treated of in the order in which they occur in the classification at the beginning of the Digest Department. These notes are continued from pages 60, 139, 261, and 399, volume vi.

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much as many cases are found, which have lasted for years, perhaps without treatment, until the eruption has increased to a degree when it is no longer bearable. Six cases have presented themselves at my clinic at the New York Hospital during the past two years ; and a short time ago I reported six other cases, affecting the epidermis, which occurred during the space of twelve or fifteen months at the Demilt Dispensary and private practice. There were several other cases there also, in which the disease affected the scalp, so that I have met with between fifteen and twenty cases within three or four years past.

When perfectly developed, typical favus is not very difficult to diagnose by any one who has seen marked cases or studied any good plates or models representing the disease. But unfortunately, it very frequently happens that cases by no means present always well-marked typical features, and sometimes the eruption is a little difficult to recognize. Favus is rightly counted among the chronic diseases of the skin, and is one which, when deeply seated, is rebellious to cure, and a case which has lasted any length of time before treatment is likely to cause both the patient and physician considerable annoyance in its removal. The following cases, while they do not present anything very unusual or startling, still present some features different from the most typical development of the disease, and represent, perhaps, the average run, as they are presented for treatment.

This eruption is commonly thought of and spoken of as one affecting the scalp. But this region is not the only one attacked, as is shown by the mention of the six cases in which the epidermis of other portions was affected. We will, therefore, first detail cases where the eruption was developed upon the scalp, and afterward some in which the epidermis of other portions alone was affected.

CASE 1.—Alice S——, an apparently healthy child of 11 years, was brought to the city by a lady to be cared for in her family, and was first placed under my care, March 1, 1876. It was found that she had an eruption on the scalp which had lasted for many years, and which had already affected an area equal to between two and three square inches. On the top and back of the head there were half a dozen red spots of different sizes, from one-half to two inches in diameter, touching one another, on which the hair was largely gone, and there was some cicatricial tissue in them. The hair had been cut short, and the scalp thoroughly cleansed, so that at the first visit there were none of the characteristic yellow cups belonging to the disease. Many of the hairs, however,

were found to come out very easily on traction, and, on examination, were found to be loaded with the spores of the achorion Schönleinii. She was given an ointment of the nitrate of mercury, three times diluted, and epilation was begun by the forceps. The hairs were extracted every few days, in number from five hundred to two thousand at a sitting, and by the end of one month it was found that over eleven thousand hairs had been taken out. The originally affected spots had then improved considerably, being much less red, but the disease had spread forward, there being a number of spots with yellow cups. The depilation was proceeded with more actively every other day or so, as many as twenty-six hundred hairs being removed on one occasion ; and a ten-per-cent. solution of oleate of mercury was given, to be thoroughly rubbed in. On June 12th, nearly three months after the beginning of treatment, there were still many diseased hairs found, but no cups, and the condition of the originally affected parts had improved very greatly, they becoming almost pale. The depilation had been continued faithfully, the hairs being extracted repeatedly from the same places as they regrew, and at this date the total number extracted had amounted to over seventy thousand. The treatment was continued a short time longer, and the oil of cade was given to be thoroughly rubbed, morning and night, into all the diseased surface. The hairs were still depilated by hand, with the forceps, by my assistant Dr. Campbell, and count was made and recorded at each visit. When the patient was dismissed cured, the entire number of hairs removed had amounted to about seventy-eight thousand, and no trace of active disease could be found.

The child was again seen on May 3, 1877, when the scalp was found to have remained entirely well ; there had been no treatment for many months. There then existed several partially bald spots, one on the left anterior portion of the scalp, and several smaller ones grouped together over the top of the head. The largest spot was irregular in shape, and an inch and a-half in diameter. These had paled in color, completely cicatrized, and presented a moderate number of straggling hairs.

CASE 2.—In the next case, Martin M——, aged 14, who first came under my care January 19, 1878, Dr. Campbell extracted upward of 75,000 hairs with the forceps before the disease was cured. The eruption had existed on the scalp since he was four or five years of age, and had bared a large area, equivalent to about ten square inches. His older brother was about bald from the disease, and this patient subsequently brought a niece, aged 8 years, affected with the same. This boy was cured, and was seen a year and a-half after his first visit, and remained perfectly free from favus.

CASE 3.—Lizzie T., aged 13 years, first applied at the New York Hospital for treatment, January 28, 1880. Her favus had lasted nearly, if not quite, since her earliest recollection. Almost the entire surface of the hairy scalp was found to be affected,

reaching from within half an inch of the anterior margin of the hair, to an inch from the posterior and lower border of the hairy scalp, and extending almost to the ears on either side. Along the front margin of the disease there were groups and masses of well-defined cups of a sulphur-yellow color, moderately raised above the surface. Most of the rest of the scalp was covered with a confused mass of yellowish crusts and scales with some already bared spots of cicatricial tissue. The growth of hair over all the scalp was dry and harsh and very moderate, though with a little care she managed so that the disease was not very apparent, even on removing the hat; and the hair at the back of the head was in a braid several inches in length. But on scattering the hair, it was found to be very thin over most of the diseased surface.

Some time previous I had had occasion to treat a large number of cases of ringworm in a public institution, and desiring to depilate more rapidly than could be done by the forceps, I had, after several attempts, devised a method for the extraction of the hairs, which I found of the greatest service in this and several other cases within the last two years. The method consists in using masses or sticks of a very adhesive material, which can be melted and made to adhere to the hair in large bodies, and which when cold are forcibly removed, drawing numbers of hairs at once with them. The idea sought for in the formation of these sticks, was to obtain a material which, while it melted at a comparatively low temperature, would cool quickly, and be perfectly hard at that of the body. It was also necessary to obtain one which would have great cohesive properties; some of the earlier combinations experimented with were found to break off too readily.

After a number of trials with different combinations, I succeeded, with the aid of Mr. F. Haas, pharmaceutist, in obtaining one which answers the purpose to a most perfect degree. The following is the formula:

℞

Ceræ flavæ,	ʒ iii.
Laccæ in tabulis,	ʒ iv.
Resinæ,	ʒ vi.
Picis Burgundicæ,	ʒ x.
Gummi Dammar,	℥ iss.

M.

After the ingredients are thoroughly incorporated, the mass is rolled into sticks of various sizes, from one-quarter to three-quarters of an inch in diameter, and cut off in lengths of two or three inches. The idea of the different sizes is that the work may

be rapidly done with the broader sticks where a large surface is to be gone over ; while the thinner ones fit small irregularities, or can be applied to isolated spots. In the employment of these sticks the hair should be cropped short, about one-eighth of an inch long, over the part to be treated. The end of the stick is heated in an alcoholic flame, and pressed quickly upon the hair with a slight rotary or twisting motion, until it rests upon the scalp. It is to be left on until quite cold, and is then removed by bending it over and drawing the hairs in succession even with a slight twisting motion. When the stick is removed from a greatly-diseased patch of favus which has still much hair, the end is as thickly set with the bristling hairs as can be imagined, resembling a very fine brush. The best method of preparing the stick for a second application is to burn the hairs in the flame of the lamp, and wipe the end of the stick firmly on a sheet of paper. This both destroys the parasite in the hairs extracted and leaves a smooth surface ready for subsequent use.

The hair on this little girl, Lizzie, was clipped over the portion about the vertex, and depilation immediately entered upon by the above method. The operation was generally repeated every other day, and she bore it well, although considerable pain was sometimes occasioned when hairs lightly affected were extracted. After the depilation at each sitting a lotion of bichloride of mercury, four grains to the ounce of water, with a little muriate of ammonia, was thoroughly rubbed into the bared area for several minutes by means of a stiff cloth swab. She further used at home an ointment of nitrate of mercury, three times diluted, over the whole scalp. The affected surface was so very large in this instance that considerable time was occupied in even going over it all once ; from a considerable portion of it it was necessary to extract the hairs a number of times, because as soon as fine hairs appeared, minute cups would be seen from time to time. During the summer little was done for her, and the hair was allowed to grow and attain some length. Early in the autumn a few doubtful appearances were observed, and a small amount of depilation was practised with the sticks, and single hairs were extracted with the forceps.

She has now been left a number of months without treatment, although she attends at stated intervals for observation, and has been twice exhibited at my lectures at the hospital this winter. The hair has now grown to a considerable length and is reasonably soft and silky, having lost all the former dryness and harshness ; and, although the surface of the scalp is a little scaly from the harsh usage which it has received, there is no trace of a cup anywhere seen, nor can a particle of fungus be found on the scales or

hairs, on microscopic examination. She was seen on January 29, 1881, one year from her first visit. She had then been entirely without any treatment or local applications of any kind to the scalp for four months. Not a trace of the former disease was visible except a very moderate amount of scarring, and the hair was about four inches long over the parts from which it had been frequently extracted. When dressed in the ordinary way, one could hardly discover that there had been any previous disease. She was seen again one month later, and the result remains perfect.

Case 4.—Mrs. Mary J., aged 25, came to Demilt Dispensary in October, 1878, for the treatment of her child, a boy of six years, who was found to have favus of the scalp, which had lasted four years. This case possessed no special interest and will not be detailed. After several months' attendance, in February, 1879, it was learned that the mother was also affected with a disease of the scalp, which had persisted and increased for many years, and, indeed, since seven years of age; this had been often treated in early life, but she had become discouraged of late years, and nothing had been done for some time. Although she was very desirous of having her child's scalp cured and made him submit to the necessary depilation with the sticks, it was with much difficulty that she was persuaded to allow an examination of her own head; it was then found that the entire middle portion of the scalp, to the width of between two and three inches, extending from ear to ear, was the seat of a well-marked favus. The anterior portion was extending pretty acutely, and along its margin quite well-developed and perfectly preserved favus cups could be seen. The larger portion of the surface was already cicatrized, but presented straggling hairs with occasional development of favus cups. Depilation was practised by means of the sticks, as in the former case, and with great improvement for a time. She then became irregular in attendance, but again came under regular care, and the surface was entirely freed from the disease, and on July 10th it was recorded that healthy hair was growing well over the diseased portion. During the progress of the treatment, it was observed that the eruption extended much further than was indicated by the line of the cups and crusts; for when the hair was cropped short, a redness extended some little distance outside of this limit, and the hairs beyond were found to come out very easily and to be greatly affected by the disease.

Even favus of the scalp is not always easily recognized. It not infrequently happens that the crusts have been entirely removed by previous treatment or by great cleanliness; or, the disease, although very wide-spread, may be in a very mild form. Still, in a case which has lasted for any length of time there will generally be found a certain amount of cicatricial tissue either in patches, or diffused between the hairs. When this exists, suspicion should

always be excited and the case watched microscopically. These points are well illustrated in the case next to be related.

CASE 5.—Mrs. Greenfield, aged 32, came to the New York Hospital, August 11, 1880, during my absence from the city. I find her case recorded as a dry eczema of the scalp which was said to have lasted six months; the hair was described as very much thinned, dry, crisp, shorter than natural, and turning gray. She was put upon treatment for eczema, with an ointment of tannin locally, and was said to have improved. When I first looked at the scalp, late in September, I was struck with the peculiar thinning and dryness of the hair, and finding some diffuse cicatrization, I suspected favus. The case was left without local treatment for several days, and on October 9th a number of minute yellow points could be seen around certain hairs, and the parasite was found in abundance by the microscope. On closer questioning I learned that she had had her scalp trouble for at least ten years.

Favus of the epidermis at times presents features which it would be difficult to recognize, if one had not seen such a lesion, or heard it particularly described. In many instances we have the exquisitely typical, bright yellow cups surrounded by a ringworm-looking halo of some size, and in these cases the yellow cups cannot be mistaken. But in another case we may have features which are such as could hardly be expected in this disease. I will briefly mention a few cases, some of which I have already reported before. The first one is particularly interesting, as the disease was artificially produced by direct inoculation, and its course very carefully watched for a long time.

CASE 6.—Doctor ———, aged 26, who was assisting me during my lectures at the hospital last winter, kindly consented to permit an inoculation to be performed on his arm with a portion of the crusts taken from the scalp of Lizzie T., the second patient mentioned, on February 27, 1880. The crust was ground into a paste with a little water and rubbed upon the left forearm with some friction, with the finger, but nothing was done to abrade the surface. This portion was then covered with a watch-glass which was fastened on by means of adhesive strips.

Nothing was seen during the first two weeks, but by the end of the third week, March 17th, the surface presented some superficial scaling in circles, slightly reddened, resembling ringworm, to a slight degree, or the condition of very superficial epidermic favus seen in other cases, but with no trace of cups. Some of the scales were scraped off and examined microscopically, and both spores and branching mycelial threads were found in and on the epidermal scales; many of the spores showed signs of segmentation. In

one instance a fine branching filament was seen to come from a much larger tube, resembling the representations which have been made of the fungus when cultivated on the microscopic slide.

It was not until six weeks later, April 26th, that distinct cups were observed, or rather that I saw them; for I believe that the doctor had remarked them a few days before. There were then three or four most perfectly formed and beautifully typical yellow cup-shaped crusts, which were very minute, none larger than the head of a very large pin, and around them a scaly, erythematous halo. They were then picked off, and white precipitate ointment thoroughly rubbed in, and all quickly disappeared. Before their destruction I secured an excellent water-color drawing of the disease.

In the next two cases, the parasitic growth was confined to a single spot in each, and in a position and condition so peculiar as to render the diagnosis difficult, and the affection one of great interest.

CASE 7.—Magdalene H——, a healthy girl of 15 years, came to my clinic at Demilt, November 8, 1877, for the relief of a curious-looking, crusted patch, just beneath the left eye. It consisted of a hard, irregularly shaped, depressed mass, about one-third of an inch long, horizontally, by one-fourth inch wide, of rather dirty yellow color, and quite firmly attached to the skin. The centre portion of the surface was below the level of the surrounding skin, but it suggested nothing of the cupping spoken of as characteristic of favus. It was surrounded by an inflammatory red border, and produced considerable disfigurement, and looked as though it might be a more serious affair. Taking it sideways between the finger and thumb, it felt hard and seemed to involve the entire structure of the skin. It had been noticed by the girl, for only five days previous to her first visit. The diagnosis of favus was made principally by exclusion, and confined by microscopic examination, which showed the crust to be wholly composed of the sporules of the achorion Schönleinii. The whole mass was lifted from its bed quite easily, without doing violence to the tissues, and a red, shining surface was left which bled a trifle at one side. She was given a little weak ammoniated mercury ointment, and, five days later, hardly any trace of the trouble could be found. When one week later she again presented herself anew, there was a very superficial eruption in the same location, and a small ring, resembling almost exactly the ordinary ringworm of the body caused by the trichophyton tonsurans.

CASE 8.—Just one year after this, Dr. Sherwell, of Brooklyn, kindly sent to my office Chas. K——, aged 20, who presented an almost identical lesion in exactly the same locality, namely, under the left eye. Four days previous, when washing in the afternoon, he noticed a small yellow spot in that situation. He did not interfere with it in any way and it had increased rapidly until the

time of the visit, when it produced considerable deformity. The crust was found under the microscope to consist wholly of the parasite.

Sometimes a favus will develop in quite a new place by contagion from an old eruption, as in the following case, where the two eruptions were widely separated :

CASE 9.—Mattie D——, aged 5 years, was brought to me December 7, 1878, mainly to be treated for an eruption on the right knee, which was said to be of only one week's duration. Here were seen four small yellow cups, depressed in the centre, and of a perfectly typical appearance. One of them was very minute ; the others were about a line in diameter. They were grouped together, and there was some erythematous redness with moderate scaling between and around them. On enquiry it was discovered that she had had also an eruption behind the left ear for a longer but indefinite period ; this, however, the mother seemed to slight. It consisted of a worm-eaten, dirty-looking mass, of a light-yellow color in some portions, in others, much darker, about half an inch long, by one-third of an inch wide, firmly adherent by means of some hairs which passed through it. There was not a single one of the characteristic cup-shaped crusts in this locality. The mass from the knee was picked out with a curette, and weak mercurial ointment applied, and the spot was well in a few days. The patch behind the ear gave more trouble.

CASE 10.—Mary F——, aged 11 years, was first seen December 27, 1878. On the left loin, just above the level of the sacrum, there was an oval patch of disease, occupying an area of little over one square inch, on which were situated a few very characteristic and sharply-defined favus cups, none of them larger than a split buckshot, the rest of the area being occupied by a scaly erythematous eruption circling around the cups. There was no other eruption elsewhere on the body or head.

Sometimes the epidermic favus will present itself without any of the cups usually recognized as characteristic of the disease. In the first case of Dr. —— it was noted that there was an erythematous and scaly eruption in circles for some time before the cups appeared, and in the scales taken from this scaly condition the fungus was found. In the following case the eruption appeared thus also without any of the favus cupping :

CASE 11.—John F., aged nine months, a brother of the preceding case, Mary F., was brought with her to Demilt, December 27, 1878, with a red, erythematous and scaly patch on the left buttock. It was nearly circular and about an inch and a half in diameter. The margin was well defined, the centre rather clearing up, and the outer portions especially had a small amount of scaling on

their surface, which latter was inflammatory in appearance. There were no cups whatever present, and the case might have passed for one of ordinary ringworm had not attention been directed to its real nature by the appearance of the typical favus in the preceding case of his sister.

CASE 12.—Mary M., aged two years, was brought to me in February, 1877, with an epidermic favus over the left eyebrow, presenting but few of the characteristic cups. The diagnosis was established by the microscope.

CASE 13.—James D., aged nearly eleven years, came to Demilt March 14, 1878. On the right cheek, near the chin, was a group of irregularly-formed, yellowish, cup-like crusts, with a margin or halo of red and scaly surfaces extending around them in an irregular circle for about an inch. The eruption was of brief duration, and was said to have been caught from a playmate who was similarly affected. The microscope established the diagnosis with certainty.

It occasionally happens that a very large extent of surface becomes affected with favus, though this is very rare. Such a condition is figured in Hebra's atlas ; but the most remarkable instance of this with which I am acquainted occurred in Montreal, and I had an opportunity of examining the case by the kindness of Dr. T. G. Roddick, under whose care it occurred. It is reported in full, with an engraving showing the extensive general distribution of the eruption, in the first volume of the Montreal General Hospital Reports, 1880, p. 227.

The girl, Amanda Taylor, aged ten, had a brother aged twelve and a sister aged eighteen, who had been so severely affected with the same disease as to lose most of the hair, and active favus was found in the brother. The eruption began in the patient five years previous to her entrance to the hospital, and was confined to the scalp for two years. When seen, the eruption occupied almost every region of the body ; the scalp was thickly covered, with some crusts on the forehead. The trunk had large masses, more thickly developed over the buttocks, but a large share of the front and sides of the body as well as the back was covered. The extensor surfaces of the limbs were also largely covered with thick, heaped-up masses of favus crusts, often arranged in lines. The eruption extended almost to the hands and feet. The "mousey" odor from the patient was most characteristic. The masses were removed from the body by water packing, and sulphurous acid was used freely. When treatment was discontinued for a time the characteristic favus cups reappeared, but all yielded well subsequently to treatment.

Comments.—It will be seen from these cases that favus may be both a very chronic disease, or it may develop, especially upon

the epidermis, in a very rapid manner. In the cases mentioned, where it affected the head, the eruption had existed since very young life, although in several other cases not mentioned, the disease was presented for treatment soon after its commencement on the scalp. In the first cases it had lasted at least five or six years ; in the second and third, at least eight, and in the fourth, perhaps twenty years.

Epidermic favus is generally an acute affair. In the second and third of the cases a lesion of considerable size was produced in a few days ; but, again, in the first case of inoculated epidermic favus, it required eight or nine weeks before the typical cupped crust was formed after inoculation, although the surface was thoroughly protected by means of a watch-glass.

It is also seen that no part of the body is spared from a liability to attack. In these cases the cheek, chin, eyebrow, region of the ear, arm, knee, loin and buttock were affected in different cases, while in the case of severe general eruption of favus mentioned, almost the entire body was invaded. Favus of the nails has been repeatedly reported.

Deep-rooted favus of the scalp is also seen from these cases to require a considerable time and much trouble for its complete cure. And these cases mentioned, as well as a number of others which have come under my observation, had all resisted repeated previous attempts at cure. On the other hand, it is also seen what a slight hold epidermic favus has upon the skin. The crusts may be readily lifted from their seat, and a very moderate treatment to the base and surrounding skin will suffice to cure the disease in comparatively a few days. The reason of the difference in the behavior of the parasite and of the disease under treatment, in the two classes of cases, is undoubtedly owing to the anatomy of the affected parts. In the case of favus upon the outer portions of the body, or epidermic favus, the parasite penetrates only the external or epithelial elements of the skin, and does not reach into its texture. Consequently, remedies penetrate to the entire depth of the disease very readily, and the fungus is quickly destroyed.

On the scalp, however, or parts provided with long, deep-rooted hairs, the parasite is found not only to attack the superficial layers of the epidermis between the hairs, but enters the epithelial structure of the hair itself and penetrates it and its root sheaths to almost or quite the entire depth of the follicle. When we extract

the hair in well-developed cases the parasite can easily be found in luxuriance throughout these structures. And finding here a succulent ground for its nourishment, it grows with luxuriance, so as to produce the external mass of crusts which heap around the hair and produce the characteristic cups.

With all deference to my friend, Dr. Purdon, who has kindly contributed an article on the treatment of favus to these pages, I must say that I entirely differ from him on the subject of the necessity for the extraction of the hair in this disease. The deep penetration of the fungus to the entire extent of the hair in its follicle, and its presence in the root sheaths would seem to indicate that in order to reach and destroy it, the body occupying this cavity must be removed. Indeed, I cannot conceive how any remedy could penetrate so as to destroy the parasite while they remain in place. I have not yet employed the measure advocated by Dr. Purdon in favus, which has been well reported on in the treatment of ringworm, namely that of producing pustulation by means of croton oil, but should expect that it could be efficacious. If I were forced to rely upon the older method of the extraction of the hairs by means of the forceps alone, I should be strongly inclined to resort to this method. But I am inclined to think that this procedure will be found to produce very much more scarring and permanent loss of hair, than attends that in which depilation forms a part. In the cases of favus of the scalp here reported, as also in others, the disease, though of many years' duration, has been entirely cured, and has remained so. And although the surface involved was very extensive, and there was considerable cicatricial tissue already formed, the subsequent growth of the hair has been reasonably soft and abundant. I should have disliked very much to have attempted to pustulate the entire scalp in those cases, and cannot believe that better results could have been obtained by this method.

In regard to the parasiticide employed, I am greatly in favor of using the bichloride of mercury of the strength of about four grains to the ounce, as an application to be made by the physician immediately after the extraction of the hairs. The watery application readily penetrates into the open follicles, and if it is well rubbed into the scalp, it accomplishes all that can be desired. But I should not be willing to place it in the patient's hands for indiscriminate and free use, as danger would certainly attend this, and harm has been reported from the reckless employment

of this remedy. For use at home a citrine ointment, diluted about three or four times, answers well the purpose of destroying whatever external evidence of the parasite exists, thus preventing the spread of the disease and its communication to others, and is, in a measure, slightly curative.

Elsewhere I have advocated sulphurous acid as a parasiticide, and still consider it one of the most valuable which we possess. But other remedies seem of more practical value in application in favus of the scalp, although the acid may be made to penetrate the depth of the follicles by covering the surface with an impermeable dressing, as an oiled-silk cap. For extensive epidermic favus it is very valuable.

I do not see how any one can question that the disease favus is produced by the presence and growth in the epithelial element of the skin, of a vegetable parasite; indeed, there are but few, if any now, who do doubt the fact. It has occurred to me within the last five years to see quite a number of groups of favus cases, certainly three or four, where a number of persons in the same family or immediately connected were affected, the one from the other. Add to this the direct production of the eruption by inoculation with the crust taken directly from a patient, upon the healthy skin of another person, as was done in the production of the first case of epidermic favus, from the crust taken from the head of Lizzie T., and also the still further confirmation afforded by the growth and luxuriant spreading of the spores when cultivated beneath the microscope, and we have, as near as can be furnished, positive proof that the masses which form the crust of favus, are indeed living vegetable matter, growing in and upon the cells of the skin, as moss flourishes on the epidermal bark of trees. It seems to me that the recognition of the achorion Schönleinii as the cause of favus is necessary both to its successful treatment and to the prevention of the spread of the disease to others.

Most of the cases of severe or protracted favus are found upon those presenting evidences of debility, generally in strumous subjects. Now, while I fully believe that the parasite does not flourish luxuriantly upon a perfectly healthy skin, that is, upon the skin of one enjoying the full vigor of life and health, even as moss or mold does not grow in the open sunshine upon perfectly healthy and fresh plants and substances, still the impression is very strong in my mind, that the favus itself has somewhat to do

with the depression of health observed in these patients. In three or four young people, between the ages of eleven and sixteen, in whom purely local treatment, of very severe and very extensive favus of the head, has been carried out with rigor and persistency, I have noticed a continual improvement in the health and vigor and tone of the system, which cannot be accounted for in any other way. These cases have occasionally taken slight internal medication from time to time, but their habits of life and surroundings have not been changed, and the medicine given in no way was sufficient to produce the improvement in health which was observed. In the second case, that of Lizzie T., almost no internal medication was employed, and yet the change in her physical health, color and strength during this past year, has been most marked. This is not a point which I can prove definitely, for all of the patients did take, as I have remarked, more or less of internal treatment. But it is a matter about which I have but little doubt, and I shall seek, at the first opportunity, to confirm the theory by withholding internal medication for a period at least. In the case of Lizzie T., there certainly has been a marked improvement in the matter of headaches, which had previously caused her great distress.

A

NEW METHOD

OF

PERMANENTLY REMOVING

SUPERFLUOUS HAIRS

BY

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A NEW METHOD OF

PERMANENTLY REMOVING SUPERFLUOUS HAIRS.*

IN the following brief communication I wish to bring forward a method of permanently removing superfluous hairs, which I devised over two years ago, and which I have employed with a success which warrants me in announcing the method, that others may employ it as well.

It is well known that the ordinarily recommended depilatories have but a transient effect (except, perhaps, in very rare instances), and for the reason that they act only on that portion of the hair which is external to the follicle ; or at the most they penetrate but a little distance into it, and necessarily cannot reach the bottom of the follicle, where the hair takes its origin. In the hope of giving relief to the deformity of hair upon exposed situations in females (who are often almost frantic from its presence) physicians as well as patients are frequently led to try, not only the depilatory remedies recommended in the books, but the various quack remedies, only to find that the effect of each is transitory, and that the hair reappears, causing even more distress than before.

I have long made trial of very many of these chemical measures for removing superfluous hair, both those of the books and those of the shops, and have so uniformly found them to fail in producing any permanent results that I have ceased to advise their use, except as palliatives, or as substitutes for shaving with the razor, or epilation, and I have repeatedly sent away patients

* This paper was written to be read at the second annual meeting of the American Dermatological Association, August 27, 1878, but the writer failed to return from Europe in time to attend the meeting. Since it was written abstracts of the proceedings of this meeting have been published in the *Boston Medical Journal* and in the *New York Medical Record*, in which allusion was made to this method of treatment by Dr. Duhring, who had employed it at my suggestion. Mention was also made of other methods of treatment, including the electrolysis, but no results were stated.

who consulted me without being able to give them much if any encouragement as to permanent freedom from their disfigurement. Nor do recent authorities afford any more hope. The universal opinion is that the only relief is from the repeated removal of the offending hairs, either by continual epilation, or by the frequent use of a depilatory, or by shaving. All of these procedures tend to make the returning hairs larger and coarser, and consequently more objectionable. With some skins depilatory pastes act unpleasantly, by inflaming the surface, and they nearly always render it harsh, and more or less scaly.

Sometimes patients themselves attempt more radical measures, and the lady on whom I first used my method, indeed for whom I devised it, has a number of black spots on the chin, which are the result of her previous attempts to destroy the follicle by a needle heated in a lamp, the soot being deposited in the skin, and forming an indelible tattoo.

Two or three physicians have recently mentioned to me a plan of destroying the hair follicles by means of electrolysis, inserting in it a needle attached to one pole of a battery, while the other pole touches the body at some indifferent point. I am not aware that this method has been mentioned in print, nor do I know how successful or permanent the results have been. I have tried this in combination with my method, but did not find that any advantage was gained over that with the needle alone, while there was certainly much more pain given, and the additional complication of a battery rendered the procedure somewhat more annoying.

My present method, as mentioned, was devised over two years ago at the urgent solicitation of a young lady who had been under my care some time, and had tried the various depilatories in vain, but who still was not willing to give up the undertaking. I have since that time employed it on four private patients, ladies, aged 23, 24, 25 and 30 years respectively; but as two of them were treated for superfluous hair both on the chin and upper lip, we may fairly count them as six cases. The hair, then, in the six cases was located, three times on the upper lip, twice on the chin, and once in the form of a large hairy nævus on the right cheek.

The method to be described is founded upon the idea of reaching down into the follicle, after extracting the hair, and thoroughly breaking up its bottom and sides, thereby exciting an inflammation which seals it from its base to its orifice. This is accomplished in the following way: A small, three-sided, straight, surgical or glover's needle is firmly inserted at its blunt extremity in a convenient handle; the smaller the better. The one which I use was made for holding a needle to be employed in manipulating microscopic preparations. The edges of the needle should be sharp, and may require grinding, even when new. A good pair of epilating forceps are also required; their edges should

be well fitting, and such as will not cut the hair, and the spring should be rather weak, that it may not tire the hand unnecessarily.

The needle in its holder being taken in the right hand, as one holds a pen, a hair is seized with the forceps in the left hand, and the point of the needle is engaged in the orifice by the side of the hair, before the latter is extracted. Gentle traction is then made upon the hair, and at the same time slight pressure upon the needle, and as the former slips out the latter readily enters the follicle for a little distance. It is then thrust in, to a little greater depth than that occupied by the hair, as shown by the root sheaths on the extremity of the latter, and with a delicate touch it may be readily perceived when it has gone to the bottom, or rather when it has penetrated the latter a little, and its sides are closely embraced by the follicle. A little experience soon shows this, and the error can be made of not having the needle penetrate deep enough far more easily than that of going too deeply. A clean needle can do little if any harm even when piercing the entire thickness of the skin.

When the needle is fairly in the follicle, it is given a number ot turns or twists, by rotating the handle between the thumb and forefinger, and when it is withdrawn the sharp edges of the needle are seen to be filled with epithelial debris scraped from the sides of the follicle, and very shortly after a drop of blood or serum is seen to issue from the orifice of the recently irritated follicle. Occasionally blood will follow immediately, and if is not controlled, in considerable quantity, but this need never give trouble, for it is readily arrested by firm pressure with the finger, with a little ordinary picked cotton or styptic cotton. I have considered it better when but a little blood followed the needle, or when only serum was observed after a few moments, because when there is a larger flow of blood it indicates rather that the needle has missed the follicle, and either gone one side of it, or penetrated its walls, and has failed to reach the bottom, where the new hair takes its origin ; though of course it is quite possible to penetrate through the base of the follicle, and pierce a little artery below. In by far the larger number of insertions of the needle I do not draw any blood, but only observe the serum exuding soon after each puncture.

At first, in order to make more sure of exciting inflammatory action, I dipped my needle in carbolic acid before each insertion. Latterly I have repeatedly omitted it. I amnot quite prepared to say that some such agent is not useful, though I believe that I have prevented the return of very many hairs without employing it. It certainly does excite much more inflammation, and the irritation from each operation lasts much longer with than wihout the carbolic acid. The burning pain for a few hours after its use is considerable, many-fold that left by the simple puncture without it ; perhaps a weaker solution of carbolic or of chromic acid would answer. It certainly is an additional protection against

doing injury by the operation, in the way of conveying poison on the needle. It might be well to bear in mind the possibility of "tattooing syphilis" by means of these punctures, if the needle by any means retained any blood from a previous patient who had syphilis. The operation is not very painful. Ladies readily endure it. The surface may be dressed with a little weak zinc ointment or lotion, or lead and opium wash, if there is much irritation. There is no appreciable scar left when all inflammatory action has subsided.

Though the procedure here described appears to be perfectly simple, it will require often no little tact and patience to carry it through successfully, to a complete removal of the deformity. When the operation is first tried it will be found that the needle by no means enters every follicle at which it is aimed. Perhaps I am safe in saying that not fifty per cent. of the hairs removed at an operation will be permanently extirpated. In some instances a false opening will be made in the skin very close to the hair, and when the hair regrows, and the attempt is made at it again, the needle will again slip into this false hole, and this may be repeated more than twice Again, often two or more hairs will be extracted by the forceps at one time, when only one of the follicles is or can be entered by the needle; or again, the needle may not have penetrated deep enough to destroy the base and the papilla, or the inflammation excited may not have been active enough to close the follicle.

Occasionally it will be found that the inflammation has sufficed to cause the external portion of the follicle to be obliterated, while the deeper portion where the hair is formed, still remains intact, or nearly so. In this event a hair is reproduced, and not being able to gain exit, it will coil itself up, or it may run beneath the surface of the skin for a distance, and cannot be gotten at without a puncture of the overlying cuticle. In these cases it is often very difficult to reach and destroy the whole of the follicle, but it can be accomplished with care.

One will be surprised at the number of hairs which exist upon any surface when they are called on to remove them one by one, a fact constantly observed when epilating for parasitic diseases, and much more patent when each follicle is to receive subsequent treatment. In entering upon this measure, therefore, the patient should be fully acquainted with the fact that patience will be required, and that the deformity is not to be removed in one, two or three sittings. It is difficult to treat much more than from twenty-five to forty hairs at a sitting; the eyes,* hands and nerves of the operator give out, and the patient is generally quite willing to have the operation cease. In the cases which I have mentioned I have operated in all together fifty-seven times, and,

* I have used the unaided eye in making these operations, having tried in vain to find some method of magnifying the surface by lenses. Each attempt seemed rather to hinder than to assist.

while all the patients are very greatly benefited, indeed the deformity largely removed, there are still a number of hairs, which reappear or develop anew, and which are still being treated. Two of the patients live out of town, and have been irregular in attendance. This development of new hairs, that is the growth of smaller into larger ones, must be ever borne in mind, for, of course, such a procedure as is here described cannot in any way hinder such an event.

In regard to the permanency of the results, this is demonstrated most satisfactorily in these patients. In the lady on whom it was first performed, nearly two years ago, the hairs remain absent. In the second case hairs which were removed nearly a year ago have not returned, and the other two cases, which were first treated six and four months ago, demonstrate the same.

Considering then the failure of depilatories, and the intense distress which these abnormal growths of hair often occasion, and the successful results in these cases, together with the correct principle on which the operation is based, it may, I think, be rightly presented to the profession as a safe and reliable method of permanently removing superfluous hair.

TWO CASES OF MORPHŒA,

WITH REMARKS ON THE DISEASE AND ITS DIFFERENTAL DIAGNOSIS.

BY

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TWO CASES OF MORPHŒA,

WITH REMARKS ON THE DISEASE AND ITS DIFFERENTAL DIAGNOSIS

MORPHŒA is a disease of which so little is known, and which has so recently acquired a definite and well recognized place in Dermatological literature, that each well observed case adds to our knowledge of it and enables us to make a more full study of the characters of this strange affection. The two following cases are, as far as I am aware, the first which have been described by an American writer, although I know that a number of cases have been observed in this country and the disease recognized by others.

By morphœa is understood the affection now thus designated by Wilson and Tilbury Fox, also by Fagge, Hutchinson and others, and which corresponds to or rather is the disease described by Addison as true keloid, although the latter from his description evidently includes the now well-recognized scleroderma under the same name. Fox thinks that morphæa bears certain relations to scleroderma, that indeed it may be a phase of it or it may exist alone. I cannot see any connection between the two, the morbid processes appear to be entirely distinct, as will appear later. Wilson declares that morphœa is related to elephantiasis Græcorum, true leprosy, that it is indeed the remnant of the disease handed down from former generations ; this view is but little borne out either by the clinical history or the phenomena of the disease, and, from the recent study made by the direction of the English government into the skin diseases of India and hot climates generally, it is found that morphœa is not known where the leprosy abounds, although a few of the reporters evidently committed the error of confounding spots of morphœa with the white spots of macular and anæsthetic

leprosy. Neumann and Kaposi have done the same, and fail to describe any disease corresponding to the cases given by Wilson and others, and those about to be presented, or to the description by Fox; the former, Neumann and Kaposi, make morphœa a synonym for the leprosy, elephantiasis Græcorum. We cannot here enter into the discussion of the differences between morphœa on the one hand and scleroderma and leprosy on the other, but after having studied a number of cases of both the latter diseases as well as the literature pertaining thereto, the conviction is fixed upon my mind that very essential differences exist between them.

With this much of introduction I will detail somewhat fully the two cases of morphœa which form the subject of this paper; the first of the cases has been under observation for more than two years, the second for nearly nine months, both of them have been seen repeatedly and watched and noted from time to time.

CASE I. B. M., a tolerably healthy and well developed, but very nervous girl of 10 years, was recommended to my care by Dr. James R. Leaming of New York, on April 20th, 1874, for the treatment of her skin affection. She is the oldest of three children, born in the U. S. of American parents, and living in the central part of New York State; her younger sister and brother are perfectly healthy, as also an infant born since. Her mother is a large healthy lady, but very subject to sick headaches, father a delicate and very nervous man whose family had all died of consumption.

About fifteen months previous to her first visit, a spot was noticed on the right hip, just above the trochanter, which was thought to be caused by a bruise acquired in sliding down hill. Soon after a similar one appeared on a corresponding part on the left side, and very shortly one was noticed on the sacrum. These, when first observed by the parents, presented much the same characters as at her first visit to me. When first seen the following appearances were recorded: On both hips, just below the crests of the ilia, are seen patches of diseased tissue presenting similar appearances, they are about two inches by one in diameter, lying horizontally, of a dirty white or yellow color, with a very distinct pinkish margin. The diseased skin is dense and stiff, cannot be pinched up, and moves in a mass; the transition from healthy to diseased tissue is well marked and readily perceived by the touch, the mottled character of the spots stands in striking contrast to the healthy blush of the child's general integument. The surface of the spots is smooth, without desquamation, and is on a level with the adjoining skin. A very similar spot is seen over the sacrum, about one and a half by one inch in diameter. On close examination the right thigh, which was thought to be healthy, is found to be of a mottled, purplish color, irregularly so, with here and there a small spot of the same yellowish, almost cadaver-like color, recognizable also by the touch; from these the red or purplish color seems to fade away, their margins being still considerably reddened; all of this redness is erythematous, disappearing momentarily on pressure, but the discolored patches undergo no

change on pressure. There are no other diseased portions on the body save those mentioned, nor does the preliminary erythema exist elsewhere.

During the time the case has been under observation I have seen in a number of places the same process gone through with, that is, the lilac or purplish congestion of the skin, mottled as though from the cold, upon which isolated spots, presenting the same whitish-yellow, cadaverous color and feel have developed. When they are formed their outline is very distinct to the sight and touch. There has never undergone in any of them any amount of contraction, the skin of the affected portions has been hard and dense, almost as though a piece of leather had been set in the skin, but when fully developed there seems to be little or no tendency to change, certainly very slight if any contraction of tissue such as occurs in scleroderma. Both thighs, both arms, and to a slight extent the forearms, the chest, and the face have been moderately invaded, the patches however keep, in the main, distinct and isolated, and at last accounts no impairment of function of any part had occurred in consequence of the disease. There was in some portions a slight depression of surface, but not at all marked; there were never any tubercular elevations.

Certain of the spots have seemed to improve very considerably under treatment, and for a while the disease seemed to be checked, but no permanent or very encouraging results have been obtained.

Case II.* Ann B., a well developed and apparently healthy woman of 30 years, unmarried, was first seen by me at Demilt Dispensary, February 29, 1876. About twelve months previously she noticed a red spot near the popliteal space, which gave but little sensation save occasional itching. The red spot gradually increased in size and soon became pale, and of the color and appearance now present. The disease has increased up to the time of first observation, but has been almost entirely checked during the last six months, since under treatment, or has spread very slowly upward while the lower portions have gradually resumed the normal state.

When first seen, the following appearances were recorded. On the right leg, commencing at a point about four inches above the center of the popliteal space, and extending downward to within about two inches of the internal malleolus, the skin is seen to be diseased, in a patch, irregular in shape and outline, from three inches at its broadest diameter above, to about an inch at other portions lower down, and turning round from the popliteal space toward the internal malleolus. The diseased surface presents the following characters: the margins are well defined and do not shade off into the healthy skin, as is shown by drawing the finger with moderate pressure, from the healthy on to the diseased tissue; the entire outline of the disease can be thus traced on care-

* This case was exhibited at the New York Dermatological Society, October 17, 1876. For discussion thereon see Archives of Dermatology, Vol. III., No. II., page 138.

congestive, purplish halo so peculiar to morphœa. Certain *cicatrices* resemble morphœa to a greater or less degree, but the antecedent history and a careful study of the surface should enable every one to recognize a cicatrix from a present and definite lesion of the skin.

In regard to the treatment of this interesting disease there is but little to add. Wilson advises to use local stimulation, Fox advises to avoid it. Both of my cases did fairly under a mild mercurial ointment gently and well rubbed in to the diseased patches. Both counsel tonic remedies; my first case, the child, did not seem any better with than without them; the second patient took none. It has occurred to me that iodine internally would promise more than any other remedy, as the clinical features of the disease suggest a lymphatic disturbance.*

Nothing is yet known in reference to the etiology or pathology of morphœa, and treatment must therefore be entirely empirical. It is hoped that further contributions of cases and careful studies of them, as also investigations into the microscopic anatomy of the disease may lead to more definite results in the future.

* I find since writing the above that Addison also suggests the use of iodine in this affection.

ON THE USE OF ERGOT IN THE TREATMENT OF PURPURA.

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THE inefficiency of the commonly employed and recommended treatment of purpura in its various forms, must have impressed every one who has come much in contact with the disease, and caused them irresistibly to wish that something more definite was known in regard to its etiology, pathology, and therapeutics, and to long for some remedy which would really exercise a controlling power over the disease.[1] Without attempting to enter into a description of purpura, or to throw any new light upon its etiology or pathology, I desire to call very serious attention to the great value of ergot in this disease. Although this was announced by Henock[2] eight years ago, and its truth confirmed soon after by Bauer,[3] and although this treatment has been reported on most favourably in isolated cases within the last few years, ergot is yet far from being recognized as being an efficient remedy in purpura, most of the text books on cutaneous diseases and general medicine not mentioning it at all, others but briefly.

[1] I am aware of the large claims made for turpentine in purpura, but its action is by no means certain, and it has failed in my hands.

[2] *Beitr. zur Kinderheilk.*, N. F. 1868 (*Archiv. f. Derm. u. Syph.* vol. i., p. 126).

[3] *Deutsche Klin.*, xxxv. 1868 (*Archiv. f. Derm. u. Syph.*, vol. i., p. 126).

lassitude, and he had not been able to work for a few days previous to his visit.

My colleague at the Dispensary, Dr. H. T. Hanks, had been recently mentioning to me his having employed ergot hypodermically in cases of uterine fibroids, and at my suggestion he was kind enough to undertake for me the hypodermic injections of ergot in this case, as I wanted them given daily and if was not convenient for me to attend to their administration. The patient received in all but four injections, one each on that and on three successive evenings, and Dr. Hanks has kindly reported to me as follows: Ten drops of Cooper's fluid extract of ergot were given, undiluted, on the first three occasions and twenty drops on the fourth. The first two insertions were in the glutei muscles, the third and fourth in the back of the shoulders. There was no complaint whatever made of pain during the operation, nor were there any immediate symptoms, except that just after the second injection he felt a little faint. None of the insertions gave rise to any unpleasant local symptoms; there were no abscesses and only a moderate amount of tenderness. I should state that Dr. Hanks has employed the fluid extract of ergot in varying doses hypodermically very many times,[1] with, I believe, not a single abscess; he is, however, very careful to inject *very slowly* and to observe the greatest care in regard to cleanliness in the syringe, excluding the possibility of the entrance of extraneous matter and air, which, I believe to be, together with the too hasty injection of the fluid, a fruitful source of trouble in hypodermic medication.

After the fourth and last insertion, of twenty minims of the ergot, immediately on reaching home, the boy ate some herring and drank a full glass of beer (the first full glass he had ever taken) and half-an-hour after, perhaps, he felt faint and nauseated, and had a discharge from the bowels which he said was blood, this latter occurring about an hour-and-a-half after eating the herring. The family were alarmed at this and were unwilling to have him proceed with the treatment, but these symptoms were certainly unconnected with any effect of the ergot; he felt perfectly well until he committed the indis-

[1] For a report of his cases see *Amer. Jour. of Obstetrics, &c.*, June, 1876 p. 263.

cretion in diet. Whether the discharge from the bowels was really blood I have no means of determining; he has had no recurrence of it.

Fortunately his refusal to follow the treatment further did not affect the issue of the case, either scientifically or with reference to his own comfort and health, as what follows will show. I saw the patient on the third day after his first visit, that is after he had had two injections of ten minims each of fluid extract of ergot, one on Tuesday and one on Wednesday night, and examined him thoroughly. The eruption of purpura had then diminished by one-half or even three-quarters, indeed it had to a large degree faded, and there had been *absolutely no new development of the hæmorrhages after the first injection;* it will be remembered that new spots had been appearing daily up to that time. What impressed me most was a very marked change in the appearance of the boy's face. It is hardly credible, but it was remarked by several physicians who saw him, that he looked very much better in colour, having lost much of his former pallor, and he himself stated that he felt very much better, stronger, and more able to work. There had been no change made in his diet or mode of life, and no medicine taken; he had had only the two hypodermic injections of ergot.

The injections were ordered to be continued, and he received one on each of the two following nights, as before stated, and none since. It is now four months and more since his last injection, and there has been no return of the disease. The history is, that the eruption continued to fade, and the boy's condition to improve, steadily after the last injection, there having been no new hæmorrhages after the first injection.

The second case, to which I referred, illustrates the use of ergot in purpura when given by the mouth, and is yet more instructive, from the fact that there had been a previous attack of the disease, that the attack to be described had already lasted some time, with fresh daily additions, and that it had been ineffectually treated by me with other means for four weeks prior to the administration of the ergot.

CASE II.—Edw. F., aged 17, was first seen January 10, 1876. He is a fairly developed and apparently healthy boy, of rather

slender build and medium height for his age. He goes to school, belongs to the better class of society, and lives in a healthy location.

Nearly one year ago, in February, 1875, he had a very similar eruption of purpura; he has not been subject to hæmorrhages, such as bleeding from the nose, nor has he had rheumatism. Two weeks before his first visit he noticed an eruption of purpuric spots about the ankles, and from that time the disease has increased, new spots appearing daily. On January 10, I recorded an eruption corresponding so exactly to that in the preceding case that I will not here describe it in full. As in the other boy, it chiefly occupied the lower legs, which were very thickly covered, the thighs less so; the eruption on the penis and scrotum resembled that in the former case very exactly, and the forearms and backs of the hands were similarly affected. He was given ten drops of the muriated tincture of iron three times a day. After two weeks there was no change in the appearance of the disease, except that the purpuric spots continued to form, and he had had lately some rheumatic pains. As he was doing well in general health the iron was continued in increasing doses.

Two weeks later it was noted that the eruption still continued to develop, new spots forming daily, and he was then given two ounces of Squibb's fluid extract of ergot to be taken in half-teaspoonful doses morning and night.

On February 21, again two weeks later, it was recorded that the eruption was almost gone, there being but a small amount of staining left. It had begun to fade within a few days after taking the first dose of ergot, and there had been no new formation of hæmorrhages; the improvement had been steady and continuous. He had then taken no ergot for five days, but there had been no return of the disease; he was ordered to resume the ergot for a week or so longer.

There are several interesting features in these cases, some of which I cannot more than mention. The almost exact correspondence in the appearance of the eruption; its occurrence on two boys of exactly the same age, they being under the same treatment at the same time; the rapid and satisfactory effect of the drug in both cases, as shown by the almost immediate

hæmorrhage, as much has been written on the subject of late. I may, however, pay a tribute of respect and admiration to the lamented Anstie, by calling especial attention to his most admirable articles in the *Practitioner* for February, April, and May, 1873, on the use of ergot in the hæmoptysis of phthisis, which are models of clinical research and experimental demonstration of the value of the drug under consideration in this form of hæmorrhage. Besides its well-known use in uterine hæmorrhage,[1] ergot has proved most serviceable in epistaxis, and its power of causing contraction of the smaller blood-vessels has been called serviceably into use in causing capillary contraction in dysentery and diarrhœa, also to control hæmorrhage from the bowels in typhoid fever, likewise to relieve congestion of the spinal cord, and certain forms of congestive headache. It has also been found of service in congestive diseases, as pneumonia, given with a view to diminish exudation by contracting the smaller vessels, and it has been asserted that it checks sweating and galactorrhœa,[2] undoubtedly by lessening the blood-supply to the respective glands. Finally, it has been used with success hypodermically in the treatment of aneurisms and varicose veins and enlarged spleen.[3]

The history then of the development of the knowledge of the drug, points clearly to its use and value in a disease so distinctively connected with the blood-vessels as is purpura. It is necessary here to clearly separate the disease purpura, in its forms simplex, rheumatica, and hæmorrhagica, from the two diseases with which it is most likely to be confounded, namely, scorbutus and hæmophilia. In the former there appears to be a direct blood alteration, consequent upon the food and surroundings of the patient, which is remedied, and with it its hæmorrhagic elements, by a change of diet, &c., with appropriate general treatment; and in the second, hæmophilia, we have probably a congenital defect in the blood-vessels, whereby they give way, unable to withstand the blood-pressure. True purpura,

[1] For a full account of the use of ergot in the treatment of fibrous tumours of the uterus, I may refer to the able address in *Obstetrics*, &c., of Dr. W. H. Byford, before the American Medical Association in 1875. See *Trans. Amer. Med. Assoc.*, vol. xxvi., p. 173.

[2] *Allg. Med. Cent. Zeit.*, May 19, 1875; *N. Y. Med. Rec.*, April 8, 1876.

[3] *N. Y. Medical Record*, April 15, 1876.

it will be remembered, differs entirely from scurvy in not owning any appreciable cause; it is certainly not due to abstinence from fresh vegetable food, nor is it amenable to the measures effectual in scorbutus; from hæmophilia, purpura is distinguished by being an acquired disease of short duration and rarely fatal, except in certain cases of the hæmorrhagic variety, in which cases, indeed, the hæmophilic diathesis may be present as well; the clinical histories of the two are also widely different.

Now we would not expect ergot to be of so much service in scorbutus (although it has been favourably reported on in this disease),[1] for it cannot replace the needed constituents of the blood; while in hæmophilia the disease of the vascular walls is such that they are, in the latter stages, unable to contract under the stimulus of ergot, although early in the disease some benefit might result from its administration; indeed, it seems to have been of use in several cases of traumatic and spontaneous hæmorrhage.[2]

But in purpura the case is different. Here the disease seems to be due to paralysis of the vessels, whereby they become dilated and diapedesis occurs or they rupture from distension, and what is required is some agent which shall cause them to contract, and this is accomplished *par excellence* by ergot. Whether it cures the disease by causing also a contraction of the vasa-nervorum, the blood-vessels of the nerves, and thus restores a normal nerve-control to the capillaries of the cutis, I cannot tell, but from the relief obtained, as mentioned above, in certain congestive diseases of the nerve-centres, and in neuralgias, as stated by Anstie, the hypothesis seems plausible, to say the least.

It is certain, however, that ergot does exert a most decided controlling power over purpura, as the cases here given testify, and as a number of observers bear witness in cases published elsewhere. The limits of this article forbid mention of these,

[1] It may be asked if there was not a scorbutic element in the third case I have reported. I answer that there was the sponginess of the gums and the history of abstinence from vegetable food, but the eruption was one of purpura and not of scurvy. The lemon juice undoubtedly assisted the cure, but the eruption was checked so promptly that the ergot must receive much of the credit, although I hardly believe that it would have succeeded alone.

[2] Wickham Legg, *A Treatise on Hæmophilia*, p. 119.

and reference is made to some of them in a foot-note for the benefit of those who would study the subject further.[1]

In regard to the best method of administering the ergot there are two avenues by means of which it has been given, by the stomach and into the cellular tissue by hypodermic injection. Unquestionably ergot, like any other drug, will act very much more promptly and certainly, and in a smaller dose when thrown under the skin than when placed in the stomach, as many will testify who have used it in obstetric practice and gynæcology, and in controlling a hæmorrhage. The prompt action of ergot when given in this way is well shown in the first case I have given, where the purpuric spots ceased to develop after the first insertion of ten minims, whereas half a teaspoonful, or somewhere near thirty minims twice a day in the other boy did not produce the same effect until after a few days' persistence in the remedy. As to the location of making hypodermic injections, my experience (which was very extensive when interne in the New York Hospital) in the use of quinine and other agents, is in favour of selecting the region of the pectoral muscles, or the sides of the thorax about half way down, as least liable to give annoyance; and I find that others have chosen also the pectoral muscles for the administration of ergot hypodermically.

Some have advocated particularly the use of ergotin, both for internal and hypodermic medication, and some of the reported cases of purpura have been treated with it in both ways. I am not prepared to speak positively on the subject, but from the uncertainty as to the action of ergotin dependent, no doubt, upon the quality and age of the preparation, I am strongly inclined to employ the fluid extract as was done in these and other cases of purpura, and Dr. Hanks, who has made very considerable use of this form hypodermically, tells me that he has never found any inconvenience from it in the way of abscesses or inflammatory complications.

Hildebrandt, using it for fibroids of the uterus, &c., has met

[1] Lewis, *Brit. Med. Jour.*, March 21, 1874, p. 375; Burness, *Brit. Med. Jour.*, October 31, 1874; Lane, *Brit. Med. Jour.*, September 5, 1874; Cianosi, *Gaz. Méd. de Paris*, p. 228, from *L'Indépendant*, March, 1875; Minich, *Phil. Med. Times*, vol. v. 1875, May 8, p. 502; King, *Amer. Jour. Med. Science*, April, 1876, p. 593; Richardson, *Louisville Med. News*, Feb. 5, 1876, p. 67.

The second case I have reported took half a tea-spoonful of the fluid extract night and morning; if the symptoms had been urgent a very much larger dose would have been called for; in Cianosi's case of a very severe purpura hæmorrhagica the injections were repeated at intervals of an hour-and-a-half; in Richardson's, aged eleven years, twenty drops were given by the mouth at first every four hours, later every eight. In a threatening case the remedy could be used very freely.

In regard to any dangers from the use of ergot in purpura, but two could possibly be apprehended; first, from the immediate effect of an overdose; and, second, from poisoning by long continuance of its action, producing the disease known and described as ergotism, which I need not dwell on here. Suffice it to say that although good-sized doses have been found to lessen the number of heart-beats per minute, and enormous doses of ergot will kill animals, I can find no record of any untoward event following its medicinal use in the human subject, excepting, of course, dangers which may arise from its action on the uterus when gravid or containing large tumours. Wood has given the fluid extract in ounce doses, and has never seen it cause any distinct symptoms in man.[1]

Nor is there any reasonable cause for fear in reference to its administration for any period necessary to accomplish any therapeutical effect. Dr. Anstie asserts[2] that the continuance of forty minim doses, thrice daily for six weeks or two months, has never produced any untoward symptom, beyond a general nervous depression, not greater than that which often follows a long course of bromide of potassium. Hamilton has given[3] the tincture or fluid extract of ergot in epilepsy, in doses varying from half a drachm to a drachm and a half, three times a day, and although continued from six to eight months at a time he has never seen any symptoms of ergotism arising from it. In the address of Dr. Byford on the "Treatment of Fibrous Tumours of the Uterus by Ergot,"[4] before referred to, cases are given or quoted where this drug was administered for two, three, four,

[1] *A Treatise on Therapeutics*, by H. C. Wood, jun., Phil., p. 460.
[2] *Practitioner*, May, 1873, p. 278.
[3] *New York Med. Jour.*, Feb. 1875, p. 187.
[4] *Trans. Amer. Med. Assoc.*, vol. xxvi., 1875.

six, eight months, and even two years, and, in one instance, twenty-seven months, without any mention being made of any symptoms of ergotism, except in one or two very rare instances; and these occurred very soon after the first exhibition of the drug. Finally Wood[1] speaks of commencing with half an ounce of the fluid extract of ergot and increasing the dose to one ounce three times a day, in congestion of the spinal cord; but mentions no unpleasant symptoms from its continuance, nor can I anywhere find any ill effects recorded from the therapeutical use of the drug.

In view of what I have thus far written, and looking back upon a not inconsiderable number of cases of purpura simplex and rheumatica which I have tediously treated according to the methods ordinarily recommended, and recalling vividly two fatal cases of purpura hæmorrhagica where every means I then knew of failed, I cannot but strongly urge the acceptance of ergot as *the remedy* to be employed in purpura, without waiting for the failure of other means. In the hæmorrhagic form delay is dangerous, for the disease seems to gain headway with its duration, and, although it has not yet fallen to my lot to treat a case with ergot, still, from my experience of its action in the simplex form, and from the success which has been reported in several threatening cases by others, I believe that a large number of the hitherto fatal cases of purpura hæmorrhagica could be now saved by the timely use of ergot.

I may in brief recapitulate the points of this paper as follows:—

I. The treatment of purpura, as advised in the books, is ineffective and tedious in lighter cases, and insufficient to save life in many of the severe or hæmorrhagic cases.

II. Ergot possesses a very decided power in contracting the involuntary muscular fibres, causes divided arteries to contract, acts upon the smaller arteries and capillaries, and has been proved a valuable arrester of hæmorrhage in many affections.

III. In purpura the action of ergot is very manifest, causing, when given in sufficient doses, an almost, if not quite, immediate cessation of the cutaneous and other hæmorrhages.

IV. The most effective method of administration of ergot is by hypodermic injection, and this means renders it peculiarly

[1] *A Treatise on Therapeutics*, by H. C. Wood, jun., Phil., p. 471.

valuable in purpura hæmorrhagica, where there is hæmatemesis, so that its administration by the mouth would be impossible, or in cases where the stomach would not tolerate it.

V. While ergotin, a purified watery extract, has been advised by many, and has been found to act efficiently in many cases, its action is liable to be uncertain by reason of age or faulty preparation, and after dilution with water it soon becomes inert.

VI. Fluid extract of ergot may be administered hypodermically, undiluted, and without local accident, as abscess or inflammation, if care be exercised; and its effect is very prompt and certain.

VII. Ergot may be thrown under the skin in any part of the body; the gluteal and shoulder regions answer well, but the places to be preferred are about the pectoral muscles or at the sides of the chest, about half way down.

VIII. Severe cases of purpura require the frequent repetition, even of very large doses, whether by the mouth or by hypodermic injection: both methods may be combined.

IX. Generally one or two grains of ergotin or from ten to fifteen minims of the fluid extract, hypodermically, once or twice a day are sufficient, but the former may safely be increased to five grains, and the latter to twenty or thirty minims, and repeated as often as every hour and a half.

X. Larger doses relatively are required when given by the mouth, and their action, thus given, is more slow.

XI. No fear need be entertained of any untoward effects; an ounce of fluid extract by the mouth, and seven grains of ergotin, hypodermically, have failed to give rise to any unpleasant symptoms; and from half a drachm to a drachm and a half of the tincture or fluid extract have been continued for several months without producing ergotism.

XII. Other preparations of ergot may be employed internally, —as the powder, solid extract, wine—or infusion, the dose being proportioned to the effect required and produced.

THE MALIGNITY OF SYPHILIS, WITH AN ANALYSIS OF 450 CASES OF THE DISEASE.*

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Syphilis is in many respects the most important disease which can affect the human frame, and the study of its ultimate relations to pathology, as affecting life and health is as yet in its infancy, while its real bearing upon race degeneration and death will not be known for a long time to come.

Beginning often as a most insignificant abrasion, which may not possess sufficiently definite characteristics to establish a correct diagnosis with certainty, the disease may in turn attack each and every organ of the body, cause great devastation of tissue and disturbance of function even to the destruction of life; it may also perpetuate its effects on children and children's children. Not only this, but being capable of multiplying the poison within the system, a single case can for a long period become a source of infection, whence many may acquire the disease, each in turn to pass through the same slow stages of development and destruction, and possibly or even probably, of further propagation of the disease.

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With the further study of the subject and observation of cases, and upon the discontinuance of salivation, and the adoption of tonic methods of treatment, syphilis has become more manageable and less terrifying, until it has even been spoken of by some as a benign disease—at least in certain cases. This fact of its benignity in a certain proportion of instances has long been stated in a modified degree, and it has been intimated that the difference was in the methods of treatment employed; and latterly it has been rightly pointed out that, in a certain measure the disease itself appears, at times and in some cases, to have a tendency to run a favorable course, even without treatment.

Especial attention was called to this in an article by Dr. C. L. Dana* read before the New York County Medical Society, January 10, 1881, based on certain observations made with regard to sailors presenting themselves for general treatment in the U. S. Marine Hospital Service. Under the title of "On the Benignity of Syphilis," he attempted to show that the sailor who, from his exposure, neglect and bad habits, would be likely to be most severely affected by subsequent manifestations, was, according to his experience, unusually exempt from any of the serious ravages of syphilis, notwithstanding the extraordinary frequency of past history of venereal sores obtained among this class.†

His conclusions were:—

"First—That syphilis as a rule runs a very mild course indeed among American seamen.

"Second—That it runs this course, often without regular treatment, and almost always in spite of irregular living and unhygienic surroundings."

He added that "these two conclusions tend to confirm the views of those who believe—

(a). That syphilis is curable, and furthermore,

(b). That it very often has a tendency to spontaneous cure; and

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* The Medical Record, New York, February 5, 1881.

† Exception can well be taken to the conclusions drawn in this paper. The material analyzed was not such as would furnish exact data, and in a single inspection and examination of such a class as sailors, would not be very likely to develop facts in regard to the real pathological relations of such a disease as syphilis.

(c). That this present benignity of the syphilitic poison is due in part to treatment, in part to a gradual change, either in the character of the poison itself, or in the organism it feeds on, or both."

It is not the purpose of the present paper to review this article, which is based on insufficient data, and apparently too slight personal experience with the disease to be of authoritative weight; but it is mentioned in order to exhibit this side of the question as it has already been presented. The subject of "The benign aspect of syphilis" was also brought before this Society at its last annual meeting by Dr. G. H. Fox, and excited considerable debate. At this time, as also on the occasion of the reading of Dr. Dana's paper, the present writer protested strongly against regarding syphilis as a benign disease in any sense of the word; while acknowledging that the lesions were generally amenable to carefully directed and sufficiently prolonged treatment, and while agreeing that cases varied greatly in their severity, some being very mild, attention was called to the later results of the syphilitic poison often tending to disorganization of tissue; comment was also made as to the element of uncertainty about the results of syphilitic infection, which placed the disease among the most dreadful known, since cases which at one time appear to be mild might, in later years, lead to the involvement of important organs and to serious consequences. Other points were also discussed which cannot be touched upon here.

It is not a little remarkable that at the preceding meeting of this Society, two years ago, Dr. F. R. Sturgis read a paper upon the so-called "galloping syphilis," in which he presented the severe and malignant form of the disease. In this article Dr. Sturgis states that he is not induced to attribute any influences to a supposed potency of the virus, but rather to a condition of the soil in which it is deposited, and that this, in his opinion, accounts for the varying intensity of syphilis in certain cases.

The causes leading to a depraved tendency of syphilis are all such as tend to lower vitality and to diminish the power of resistance to disease; among these may be mentioned nervous exhaustion and mental depression, extreme anæmia, abuse of alcoholics, bad hygienic surroundings, that undefined, but still practically recognized habit of body known as strumous or

scrofulous, advanced age, frequent child-bearing, the intercurrence of other disease, and many factors which cannot be here detailed.

Many of the accounts which have appeared in regard to the more severely destructive and dangerous manifestations of syphilis have related to cases observed among those in the lowest walks of life, especially such as are met with in venereal wards in the free hospitals in this and other countries.

It has occurred to me that it would not be uninteresting to go over the material which has come under my observation in the higher and middle classes of society, in order to observe to what degree the more severe manifestations of disease occur in them. The present paper, therefore, is based on observations made in private practice and in my clinic at the Out-Patient Department of the New York Hospital; the patients presenting themselves at this latter institution belong very largely to the better classes,—clerks, artisans, and those who have been reduced from more affluent circumstances, while there are few of the very poor, on account of the small fee which is charged for medical services and medicines. The accompanying tables give a synopsis of four hundred and fifty cases of syphilis, one hundred and fifty from private practice, and three hundred from public, all being cases which have been carefully observed and noted at the time, the hospital cases being all treated within the last four or five years. These tables exhibit various points, some of which will now be dwelt upon.

First, in regard to the frequency with which the manifestations of syphilis have presented themselves.

The three hundred public cases of syphilis appeared among 1,074 miscellaneous skin cases, giving a percentage of nearly twenty-eight of the latter in the whole number. The 150 cases in private practice occurred in about 2,500 miscellaneous cases of skin disease and syphilis, giving a proportion of only six-tenths per cent. The very great difference in the relative frequency of syphilis in the two classes of practice is accounted for by the fact that the public clinic included venereal diseases, while among private patients syphilis appears mainly on account of the skin lesions.

In regard to sex, there were 92 males in private practice to 58 females; in public practice there were 213 males to 87

females—a total of 305 males to 145 females. The great difference in numbers as regards sex may be partly explained by the comparative infrequency with which females recognize the primary sore, owing to the slight inconvenience usually resulting therefrom, and the fact, which is often observed, that females not infrequently either escape the earlier cutaneous manifestations of the disease or fail to notice them ; the former has seemed to be rather the real reason, because constantly it is observed in intelligent women with lesions that they give absolutely no history of preceding general cutaneous manifestations.

In regard to the ages of the patients, the vast majority of those affected were between the ages of 25 and 35, as shown in the accompanying tables; the oldest patient in private practice was a gentleman of 67 with newly acquired disease, the youngest, a few days old, had inherited syphilis; in public practice, the oldest was 65 years old, the youngest 5 weeks.

In these 450 cases there was evidence of primary lesion in 99 cases, either as a decided chancre or as an induration of a preceding syphilitic sore, and in but 71 additional cases was there a satisfactory history of chancre on the genital region. A total of only 170 in the entire 450. In private cases, a chancre or remaining induration was observed in but 24 cases, while in 49 a fair history could be obtained, dating often as far as twenty years back, a total of only 73 cases in the whole 150, or only a little less than one-half of all the cases in which there was evidence or even history of chancre, and that among intelligent private patients. Among the 300 public cases there were 46 instances where the chancre was the sole lesion observed, and these cases may therefore be excluded from any consideration in regard to the subsequent manifestation of the disease, inasmuch as this class of patients are always uncertain in attendance, and some of the cases were observed comparatively recently. This leaves only 18 out of the remaining 253 public cases in which the chancre or its remaining induration was observed in connection with the subsequent lesion, while in but 28 other cases was a satisfactory history of chancre recorded.

These figures show how little the statements of patients in regard to preceding sores on the genitals can be relied upon as

an element in establishing the syphilitic nature of a subsequent lesion. Excluding the 46 cases of chancre alone occurring in public practice, and three cases in private practice where this was the only lesion recorded, we have, in the remaining 401 cases of syphilis, only 93 instances (24 private and 69 public) where the chancre or its induration was observed, and 102 other cases (39 private and 63 public) where a reasonably satisfactory history was obtained of a true infecting chancre.

In regard now to the subsequent lesions of syphilis as recorded in these tables: a macular eruption was observed in 51 cases (12 private and 39 public); a papular eruption in 80 (25 private, 55 public); a squamous eruption in 24 (14 in private, 10 public); a tubercular eruption in 121 cases (64 private, 57 public); and gummy deposits in 49 cases (7 private, 42 public); mucous patches were recorded as an important element in 86 cases (29 private, 57 public); adenopathy was especially recorded in 86 cases (34 private, 52 public.)

Much more important than the skin lesions thus mentioned were the other manifestations of the disease recorded in the notes whence these tables were drawn. Neuralgia was noted as a special symptom in 19 private cases, sciatica apparently due to syphilis in 5 cases (3 private, 2 public). Syphilitic deafness was once recorded; headaches caused by syphilis, were noted in 14 cases in private and 6 cases in public practice; ataxic symptoms, apparently of syphilitic origin, were observed in two cases. In one very striking case. dementia was caused by the disease, which yielded very rapidly and perfectly to anti-syphilitic treatment; in another case hemiplegia occurred in a young subject with severe syphilis, and yielded very rapidly and perfectly to treatment for the disease. In one case I observed very marked atrophy of the hand with anæsthesia, which occurred as a consequence of a gummy tumor on the ulnar nerve. Rheumatism, or rather indistinct deep pain, was recorded as a special feature in 30 private cases, nodes were frequently observed on the tibiæ, the ribs, sternum, ulna, metacarpal bones, those of the cranium, etc.; well marked dactylitis occurred once; bursitis was recorded in 5 cases. There were 23 cases of eye lesions due to syphilis, mostly iritis; in one patient syphilitic choroiditis destroyed the vision in

one eye and damaged the other ; in this case the initial lesion had probably existed twenty years previously, and the only corroborative syphilitic symptom was a very characteristic palmar lesion occuring two or three years previously. In two private cases very severe double ectropion, still awaiting surgical relief, was occasioned by very extensive and deep syphilitic ulceration of the face ; in one of these cases a latent epilepsy was very greatly aggravated when the syphilis was neglected. In 29 cases (18 private, 11 public) alopecia formed a striking feature ; in one of those in private practice, a gentleman who was sent to me solely for the treatment of the alopecia, whose true nature was not suspected, very severe general syphilis followed, exhibiting dangerous brain symptoms at one period.

Thirteen patients in private practice had miscarriages as a marked symptom of syphilis, and in six more sterility was attributed to this cause. There were six deaths (5 private 1 public) recorded as due to syphilis ; of these, five (4 private, 1 public) had hereditary syphilis out of 19 thus affected.

In addition to this mere statement of the cutaneous and other lesions, mention must be made of the destructive tendency which was observed in very many cases. At the present writing I cannot give exact figures in regard to this feature, as the data were not transferred from the notes to the tables ; but much time could be occupied in detailing the ravages which the disease has made upon exposed parts. I recall readily between half a dozen and a dozen cases in private practice where serious scarring and deformity has taken place upon the nose before the disease was recognized and checked ; in several of these the septum was entirely removed, and in one there was ulceration, also, through the bridge, while the number in which serious lesions appeared upon the face and exposed parts cannot now be stated, but was great. The same is true in regard to the public cases. A number of instances of extensive gummy infiltration, and destructive ulceration of the penis were observed, while the number of those with syphilitic ulceration of the legs, often quite incapacitating for work, was very large among the poor.

The subject is by no means exhausted, and much more of interest and importance could be obtained by further study

and analysis of the notes of the cases which are presented in these tables. But space forbids this at present. The object of this study was to introduce and develop the subject of the effects of constitutional syphilis, and to call attention to the serious character of the disease, or rather its serious tendencies, under circumstances favorable thereto.

No attempt has here been made to enter into the literature of the subject, or even to refer to the observations of others; the desire was to present the matter as it appeared practically to one who was in constant contact with the disease, often many times daily, and to bring facts from recorded observations, not to prove any one point, but to picture the disease in its true characteristics. One has but to look at the vast bibliography rapidly accumulating in regard to the effect of syphilis on various portions of the body, and the books and monographs relating to disease of the various organs occasioned thereby, which are multiplying rapidly, to be convinced that in syphilis we have not only not a benign disease, but one whose ultimate relations to pathology as affecting the life, health, and happiness of the race is hardly second to any but phthisis, and it is even questionable how far previous syphilitic race degeneration has to do with the production of what is known as scrofula and tuberculosis. To what degree the term malignant is applicable to syphilis in the sense in which it is used in medicine, as for instance in connection with cancer, it is difficult to say; the term "malignity of syphilis" was introduced in the title to emphasize its ultimate harmful or even destructive tendencies under suitable circumstances, and in contradistinction to the expression, "the benignity of syphilis," which has been employed by others.

Absolutely no conclusions in regard to the death tendencies of the disease can be drawn from any mortality tables yet published. In its more commonly recognized manifestations, it is not fatal, but as an agent tending to induce changes in many organs which may end life with other symptoms, its true influence, as stated in the opening remarks, will not be known for a long time to come.

In conclusion, the following may be stated as the points worthy of consideration in connection with the present s

1. Syphilis is a constitutional infectious disease, c

TABLE 1—PRIVATE CASES.

No	NAME	AGE.	SEX.	CHANCRE.	OTHER MANIFESTATIONS.	MISCELLANEOUS.
1	Mrs. A. G.	31	F		squamous.	No miscarriages. Children healthy. Rheumatism, neuralgia, adenopathy.
2	Mrs. B. E.	29	F	of breast, July, 1880.	squamous.	Adenopathy, sore throat.
3	B. A.	40	M		tubercular, nose.	Wife has uterine difficulty. No history of chancre.
4	Mrs. B. P.	25	F		papular—6 mos.	Node on forehead 5 months ago. Sciatica, adenopathy, ulceration of tonsils. Husband had erysipelas—child eczema. No miscarriages.
5	Mrs. D. R.	38	F		tubercular, face—3 yrs.	No miscarriages. Had "canker" sores. Had measles (?) 20 years ago.
6	Miss E. H.	32	F	of mouth, Aug. 1879; induration present.	papulo-pustular.	From kissing. Excavation of right tonsil. Alopecia, adenopathy, iritis, sternal tenderness. Great subsequent destruction from general ulceration. Double ectropion.
7	E. C.	26	M	recent; induration present.	papular.	
8	Mrs. A. J.	30	F		tubercular, left leg.	Husband, bubo 8 years ago. First child still born; no eruption. Second child died at 15½ months, of bowel trouble. Twins at 7 mos., in July, (5 mos. ago,) lived only few hours. Had iritis. Velum and soft palate destroyed. Rheumatism.
9	B. W.	39	M	in 1864 (?)	pustular, left leg.	Neuralgia, iritis.
10	B. A.	36	M	12 years ago (?)	tubercular, nose and lips.	Perforation of septum nasi. Occasional headache over center of head.
11	B. A.	32	M	10 yrs. ago.	papular, chiefly arms and legs.	Adenopathy.
12	Mrs. B.	24	F	5 mos. ago, had sores in vagina.	pustular.	Miscarriage 8 months ago. Rheumatism.
13	B. W.	40	M	8 or 9 yrs. ago (?)	tubercular.	Father of No. 14. Nasal catarrh (?) sore throat, sciatica, pain in back.
14	B. C.	6 mo.	M		bullous.	Son of No. 13. Hereditary syphilis. Has sore mouth. Never nursed from bottle. Loss of nails. Child died when 1 yr. old.
15	Mrs. B. S.	22	F		papular, hands & arms—mucous patches inside left cheek.	Eruption appeared 3 mos. after marriage and when pregnant. Hair falls out.
16	Mrs. B. G.	25	F		tubercular, right fore arm.	Has had five or six miscarriages occasioned by fright, &c. No history of syphilis. Had sore on back of head 12 years ago. Four years ago eruption on shoulder similar to that existing at present.
17	B. W.	21	M	Oct. 1875, 14 mos. ago; induration present.	mucous patches, back of throat, ulcer on tongue.	Tenderness of shins. Adenopathy.
18	Mrs. B. M.	35	F		gummy ulcer on right knee.	Married 15 years ago. Husband lived 1 yr; was shot during war. Had miscarriage at 3 mos. Had eruption on knee before death of husband, but now free some time.
19	B. O.	65	M		macular, general.	Husband of No. 20. Adeni[illegible] of infection.
20	Mrs. B. O.	60	F		macular, general.	Wife of No. 19. No hi[illegible] Rheumatism, sore t[illegible] adenitis.

Table 1—Private Cases.

No	Name	Age.	Sex	Chancre.	Other Manifestations.	Miscellaneous.
21	B. F.	43	M	in 1864.	mucous patches on end of tongue.	Chancre, followed by macular eruption in 2 mos. After that no trouble until 10 yrs. subsequent (4 yrs. ago), then mucous patches on tongue. Wife no miscarriages.
22	B.	5 wks	F		bullous.	Hereditary syphilis. Death.
23	Mrs. B. S.	43	F		papular, general.	Husband died of consumption. Was separated from him 5 yrs. before death. No history of infection. Adenopathy. No miscarriages. Headache. Had sore lips, followed by swelling of submaxillary gland previous to eruption.
24	B. J.	56	M		squamous, general—mucous patches on scrotum.	Rheumatism. Dimness of vision. Adenopathy. Headache. Onychia.
25	Mrs. C.	32	F		bullous.	Is three months pregnant. No history of syphilis.
26	C. A.	33	M	upper lip.	tubercular, head, arms and legs.	No rheumatism. No alopecia. Sore on lip, followed by sore throat. Node on right fibula.
27	C. T.	50	M		squamous, on the palms.	
28	Mrs. C. H.	35	F	on breast, 2 yrs. ago.	papular, nose.	Three miscarriages. Has had sore throat.
29	C.	50	M		tubercular, left leg.	Clear history of syphilis.
30	Mrs. C. J.	58	F		papular, general.	Throat and tongue sore. No history of infection.
31	Miss D.	19?	F		papular.	Mother of No. 62. One premature birth. Rheumatism. Alopecia. Throat ulcerated.
32	D. L.	54	M	in 1856, (16 yrs. ago.)	tubercular, left side of forehead and forearms.	
33	D. T.	54	M	22 yrs. ago (?)	squamous, palmar.	
34	Mrs. D. F.	33	F		squamous, palmar.	No miscarriages. Alopecia. Rheumatism. No headache. Node on right tibia.
35	D. L.	39	M	in 1865 (?) 6 yrs. ago.	tubercular, forehead.	No rheumatism. No sore throat.
36	D. W.	37	M		tubercular, lower lip and back of neck—mucous patches at edge of lip.	Wife no miscarriages and no children. Married 12 years.
37	E. J.	31	M		tubercular, legs, arms and forehead.	No history of infection.
38	Miss E. J.	22	F		papular, right cheek—mucous patches, side of tongue.	One miscarriage. Sternal tenderness. Ulceration of fauces.
39	E	40	M		tubercular, left knee and hip.	No sore throat. No rheumatism. Headache.
40	F. T.	42	M	4 yrs. ago.	tubercular, arms and legs.	Alopecia. Rheumatism.
41	Mrs. F. M.	31	F		tubercular, left shoulder and knees.	Had 3 miscarriages. Sore throat. Headache.
42	G. T.	47	M	5 yrs. ago (?)	papular, nose and forehead.	No rheumatism.

TABLE 1 —PRIVATE CASES.

No	NAME	AGE.	SEX	CHANCRE.	OTHER MANIFESTATIONS.	MISCELLANEOUS.
43	G. J.	2⅔	M		mucous patches about anus.	Son of No. 44. Hereditary syphilis. Teeth decayed. Mother has had miscarriages and sore throat. Child died of inflammation of brain.
44	G. J.	42	M	12 yrs. ago.	squamous, palmar.	Father of No. 43. Wife has had several miscarriages. Sore throat. Rheumatism. Neuralgia.
45	G. J.	24	M	16 mos. ago.	papular, arms, hands and feet — mucous patches on tongue.	
46	Mrs. H. F.	24	F		tubercular.	Is married and has 3 healthy children. No history of infection.
47	H. B.	28	M	1869. Induration present.	macular — mucous patches in mouth.	Adenopathy. Sore throat. Onychia of little toe of left foot. Rheumatism. Alopecia.
48	H. T.	39	M		tubercular, end nose.	No history of infection.
49	J. J.	40	M	5 yrs. ago(?)	squamous, palmar.	11 yrs. ago lost right eye from inflammation, caused by sand, in Persia.
50	K. W.	32	M	3½ yrs. ago. Scars can be seen	tubercular, in front of right ear.	
51	M. E.	53	M		tubercular, ulceration of right hand.	No history of infection.
52	L. E.	43	M	during war	tubercular, face.	No rheumatism. Iritis. Neuralgia.
53	L. A.	42	M	8 yrs. ago.	papulo-tubercular.	Glaucoma. Tenderness of tibia.
54	Mrs. L. L.	36	F		papulo-tubercular.	
55	M. J.	37	M	16 or 18 yrs. ago.	squamous, tongue— mucous patches on tongue.	Headache. Neuralgia.
56	M.	32	M		tubercular, cheeks and nose.	Rheumatism. No alopecia.
57	Mrs. M. H.	28	F		maculo-papular.	Wife of No. 88. 7 or 8 yrs. ago had child; lived 2 mos. No children since. Headache. Neuralgia. Sore throat. No alopecia. No history of infection.
58	Mrs. M. G.	42 10/12	F		squamous, palmar.	No history of infection.
59	M. F.	22	M		papular, general— mucous patches on pharynx & tonsils.	Denies ever having had chancre. Rheumatism.
60	M. A.	8	F		tubercular.	Hereditary syphilis. Nothing definite in reference to history. Father said to have had syphilis. Whole upper portion of chest, neck, right cheek and chin affected—tissues destroyed.
61	N. E.	26	M	urethral. 6 mos. ago.	mucous patches about anus.	Father of No. 62. Adenopathy. Rheumatism. Sciatica. Venereal warts. Sore throat. Alopecia.
62	N.	2¾ mo.	M			Son of Nos. 31 and 61. Hereditary syphilis. Snuffles. Disease of larynx and lungs. Died when 3½ mos. old.
63	Mrs. O.	67	F		tubercular, left arm and left leg.	No history of infection.
64	S. J.	23	F		tubercular, right forearm.	Late hereditary syphilis. N Square forehead. Double er has had ten still-born c.

TABLE 1—PRIVATE CASES.

No	NAME	AGE	SEX	CHANCRE.	OTHER MANIFESTATIONS.	MISCELLANEOUS.
65	Mrs. W. H	30	F	lower lip 2 years ago. Induration present.	mucous patches in throat.	Wife of No. 125. Has had miscarriages. rheumatism, neuralgia, iritis, insomnia at first. Husband had sore on prepuce seven years ago.
66	Mrs. M. M.	45	F		tubercular, end of nose and nostrils.	Husband has eruption on face. Septum of nose perforated and nearly all destroyed.
67	Mrs. F. J.	38	F		tubercular, nose and lips.	No miscarriages. No rheumatism. History of syphilis.
68	G D.	44	M		squamous, palmar.	No history of syphilis. Sore throat. Dimness of vison of left eye.
69	S. G.	28	M	6 years ago.	papulo — squamous, general — mucous patches in mouth.	Sore throat, alopecia, rheumatism.
70	W. D.	18 10/12	M		papulo-pustular.	Adenopathy, sore throat, rheumatism. Exposed six months ago; no sore (?). Iritis.
71	H. H.	50	M	19 yrs. ago.	tubercular, cheeks and nose.	Rheumatism, adenopathy. Nodes.
72	P. C.	28	M	Induration. Exposed June 8 and 20, appearance of sore July 5.		Sore throat. No eruption.
73	V. T.	44	M		papilliomatous eruption of heel.	Had tubercular eruption ten years ago.
74	C. A.	31	M	slight but distinct hardness.		
75	B. W.	26	M	1½ years ago (?).	papular, general — gumma.	Infiltration of uvula.
76	B. J.	49	M	5 yrs. ago (?)	tubercular, chin.	No rheumatism. No headache.
77	Miss M. K.	21	F		tubercular, forehead between eye brows.	No history of infection. No rheumatism.
78	Mrs. J. C.	43	F		tubercular, nose and nostrils.	Neuralgia, alopecia.
79	Mrs. S. J.	40	F		tuberculo-crustaceous nose—gumma, soft palate.	Alopecia, frontal headache, excavation of soft palate.
80	Miss J. C.	27	F		papular, arms, legs, chin and neck—mucous patches, fauces.	No alopecia, no rheumatism; eruption came after vaccination five years ago; sore throat.
81	D. T.	43	M		tubercular, forehead.	Denies ever having had syphilis. No children. Married twenty years.
82	D. M.	1 m	F		macular, face, palms, soles, and buttocks.	Hereditary syphilis. No syphilitic history, but another child died when five months old one year ago. Baby snuffles.
83	P. B.	41	M			No history of infection. Eruption eight years ago. Locomotor ataxia; characteristic scars on legs. Wife had still born child five years ago.
84	R. M.	30	M	urethral; induration present.		
85	B. E.	23	M	2 months ago; induration present.		Adenopathy.

TABLE 1—PRIVATE CASES.

No	NAME	AGE	SEX	CHANCRE.	OTHER MANIFESTATIONS.	MISCELLANEOUS.
86	T. O.	45	M	lip, seven years ago; scar visible.	tubercular, palms.	Iritis, neuralgia, rheumatism. Infection, possibly from end of segar.
87	Mrs. O. J.	32	F		tubercular, ear.	No rheumatism. No history of infection.
88	M. H.	39	M	2 weeks ago 3 mos. after exposure; indu'n still present.		Husband of No. 5 Adenopathy.
89	M. J.	28	M	urethral; induration.	macular, maculo-papular.	Adenopathy. Rheumatism.
90	R. R.	21	M	Induration present.	papular, squamous—mucous patches, lips and fauces.	Adenopathy.
91	G. D.	35?	M	Induration present.		Adenopathy.
92	C. G.	40	M	Induration present.		No adenopathy.
93	B. G.	36	M		papulo-tubercular, arms and ankles.	Father of No. 55, Table 2, with hereditary syphilis. Neuralgia; much bone trouble.
94	G. J.	33	M	of lip, from segar. Induration.		Adenopathy.
95	H. N.	25?	F	peculiar form.		
96	P. C.	33	M	in 1866 ?	papular, squamous—gummy, lower eyelid—mucous patches on tongue.	No rheumatism. No alopecia.
97	T. T.	48	M		papular.	Adenopathy.
98	R. J.	46	M	16 yrs. ago.	tub'cular, serpiginous back—mucous patches corner of mouth.	Wife has had no miscarriages.
99	S. B.	34	M	in 1867.	tubercular, legs.	Nodes of frontal bone, headache.
100	S. E.	28	M	2 mos. ago.	papular, hands and arms—mucous patches, ulceration of fauces.	
101	S. C.	34	M		mucous patches, mouth, tongue, and upper lip.	No rheumatism. No history of syphilis. Has had chancroids ?
102	S. J.	38	M	13 or 14 yrs. ago.	tubercular, arms.	Rheumatism. Neuralgia.
103	S. J.	26	M	in 1873. 6 years ago. Scars still to be seen.		No adenopathy.
104	S. W.	50	M		tubercular, neck.	History of infection.
105	S. J.	32	M		tubercular, right cheek	No history of infection.
106	T. S.	56	M		mucous patches, inside of left cheek.	Never exposed ? Canker sores 8 or 9 months a year.
107	M. S.	41	M	15 yrs. ago.	tubercular, nose.	
108	Mrs. T. O.	32½	F			Married 12½ years. Pregnant once. Premature delivery at 8 months, child dead 10 days of hydrocephalus.
109	Mrs. V—h.	36	F	on lip (?) 16 years ago.	papular, hands, face and thigh.	Rheumatism. No alopecia. No iritis—adenopathy.

TABLE 1—PRIVATE CASES.

No	NAME	AGE	SEX	CHANCRE.	OTHER MANIFESTATIONS.	MISCELLANEOUS.
110	V. J.	30	M		tubercular, nose and left leg.	
111	Miss W. K.	30	F		papular, face.	Alopecia, adenopathy, neuralgia.
112	W. H.	39	M	in 1870. 9 years ago	papulo-tubercular — mucous patches, on tongue.	No adenopathy.
113	W. J.	35	M		tubercular, nose.	
114	T. W.	32	M	in 1869. 11 yrs. ago.		Nervous symptoms. Hyperæsthesia of scalp.
115	Mrs. A. T.	29	F	lower lip; induration present.	tubercular, face and forehead.	Adenopathy, neuralgia, rheumatism. Delivered of one still born child at full term A second child, born after being 2½ years under treatment, was healthy.
116	A. W.	23	M	6 mos. ago.	papulo-tubercular.	Adenopathy, alopecia.
117	Mrs. L. S.	23	F		papulo-tubercular.	Rheumatism, headache.
118	Miss A.	20	F			Sore throat, alopecia.
119	B. A.	28	M	urethral; induration felt.	mucous patches, in throat.	Adenopathy.
120	Mrs. D. J.	25	F	lower lip. 4 yrs. ago.	gummy, of tongue.	Husband dead. Said to have had several diseases. Adenopathy.
121	Mrs. G. A.	26	F		tubercular, ulceration	Married 5 years. No children. No miscarriages. Adenopathy, neuralgia. Soreness of throat.
122	M. W.	35	M	10 yrs. ago?	tubercular, ulceration	Sore throat, iritis. Tenderness of bones. Adenopathy, alopecia.
123	S. M.	2 $\frac{11}{12}$	F			Hereditary syphilis. Dactylitis. No history of syphilis in father or mother
124	T. C.	22	M	urethral; induration felt.	papulo-pustular.	Adenopathy.
125	W. H.	39	M	7 years ago		Husband of No. 65. Adenopathy, rheumatism, aortic and mitral disease, with hypertrophy; also headache.
126	H. E.	34	M	uncertain.	tubercular, nose.	Headache. No rheumatism. Neuralgia. Wife has had no miscarriages.
127	Mrs. W. J.	22	F	1 year ago?	mucous patches, in throat.	Two miscarriages, rheumatism. Perforation of palate.
128	Mrs. T. J.	30	F		tubercular, nose, cheeks, &c.	Sore throat. No alopecia.
129	Mrs. S. J.	24	F	2½ yrs. ago	tubercular, nose.	Alopecia. Premature birth at 7 months; child lived 7 weeks, had snuffles. Three other children born, 2 born after coming under my treatment.
130	Mrs. S. A.	39	F		tubercular—gummy.	Tenderness of bones. Prominent frontal eminences. Erythematous sore throat. No alopecia.
131	Mrs. O. G.	26	F		tubercular, chin.	No history of infection.
132	Mrs. D. K.	44	F		tubercular, nose.	No history of infection. Headache.
133	Mrs. T. R.	41	F		tubercular, nose.	No history of infection.

Table 1—Private Cases.

No	Name	Age	Sex	Chancre.	Other Manifestations.	Miscellaneous.
134	Miss H. L.	23	F		tubercular, nose.	Alopecia.
135	Miss H. L.	21	F		tubercular, ulceration right knee.	Neuralgia, rheumatism.
136	Mrs. M. M.	23	F		tubercular, middle of back.	Three miscarriages. Husband died of hasty consumption. No rheumatism, no neuralgia, no sore throat.
137	F. P.	32	M	14 yrs. ago.	tubercular, scalp, palm and penis.	Tongue, mouth, and throat sore.
138	F. J.	26	M	1 year ago.	papular, forehead and arms--mucous patches at angles of mouth and at anus.	Adenopathy.
139	H. G.	31	M	5 years ago		Occasional headache. Wife two children, no miscarriages.
140	H. L.	33	M		tubercular, ulceration of scalp — gummy sarcocele — mucous patches on tongue.	No rheumatism, no headache.
141	H. H.	45	M	in 1872.	tubercular perinæum and scrotum.	Rheumatism, neuralgia, and severe and recurrent periostitis.
142	H M.	57	M	9 mos. ago.	papular, squamous	Husband of No. 143. Headache. No rheumatism.
143	Mrs. H. M.	34	F		macular, papular, and squamous – mucous patches, corner of mouth.	Wife of No. 142. Throat and palate congested.
144	J. D.	29	M	5 mos. ago. Hardness still pres't.	macular, general.	Rheumatism, alopecia. Amyloid disease of the liver (?) later.
145	Mrs. K. F.	29	F		tubercular, nose.	Married six years. No children, no miscarriages. No history of infection. Rheumatism. Scarring of hard palate.
146	L. F.	40	M	lower lip from segar. Hardness distinct.	papular—mucous patches, of lip.	Smoked segars made by patient affected with chancroids ?
147	L. L.	48	M	3 mos. ago.	macular - papular.	
148	L. B.	30	M	5 mos. ago. Hardness present.	macular ? -- mucous patches at anus.	Alopecia, adenopathy, headache. No rheumatism
149	Mrs. M. W.	26	F		papulo-squamous, hands.	Muscular rheumatism.
150	M. C.	22	M	in 1875.	tubercular, ulceration on leg.	Married 2 years. Wife no miscarriages.

TABLE 2—PUBLIC CASES.

No	NAME	AGE	SEX	CHANCRE.	OTHER MANIFESTATIONS.	MISCELLANEOUS.
1	L. J.	27	M		mucous patches, tongue and throat.	
2	M. F.	42	M		mucous patches, ulcers pharynx and soft palate.	
3	M. H.	54	M			
4	M. D.	50	M		mucous patches, on tongue.	
5	V. P.	23	M	Mixed.		Large ulcerating chancroids, followed by severe and prolonged syphilis.
6	W. E.	38	M		maculo-papular, head, —mucous patches.	
7	M. E.	32	M	Induration present.	macular.	
8	D. D.	33	M		tubercular, buttocks.	
9	M. R.	27	M			Osteocopic pains. Periostitis, tibiæ, catarrh, cachexia.
10	C. G.	40	M	Induration		
11	D. J.	30	M			
12	H. J.	45	F		papular, squamous.	Wife of No. 13.
13	H. P.	42	M			Husband of No. 12. Has brain disease of syphilitic origin, dementia, insomnia, delirium.
			F			
14	D. P.	35	M	Induration		Adenopathy.
15	M. P.	26	M	9 mos. ago.	macular, arms.	
16	D. E.	35	M	Induration		
17	Mrs. L. T.	30	F			Atrophy of hand from syphilitic nerve-lesion. Child, 15 years old, has hereditary syphilis.
18	L. W.	31	M		tubercular, left forehead.	
19	Mrs. T. M.	43	F		gummy, ulcer on leg.	General eruption 9 years previous.
20	Mrs. P. E.	50	F		tubercular, nose and lip.	
21	Mrs. K.	45	F		tubercular, face—mucous patches, forehead.	Headache, drowsiness, tenderness on pressure over forehead, sternal tenderness, nodes in forehead.
22	R. B.	20	F		macular, squamous, face.	
23	M. W.	32	M	Exposed 5 weeks ago.		
24	S. M.	25	M	about 4 mos. ago.		Iritis. Remains of general pustular eruption.
25	Mrs. B. U.	42	F		gummy ulcer on leg	Rather obscure history of infection.
26	Mrs. L.	26	F		tubercular, knee.	Pigmentary syphilide of neck.
27	T. S.	25	M		mucous patches.	
28	S. L.	21	F		mucous patches on anus.	

TABLE 2—PUBLIC CASES.

No	NAME	AGE	SEX	CHANCRE.	OTHER MANIFESTATIONS.	MISCELLANEOUS.
29	A. J.	6 wks	F		macular, feet and palms and arms—papular, around mouth—mucous patches at anus.	Hereditary syphilis. Mother has had premature birth of a still born child, after that a miscarriage, then this child. Previously had 2 healthy children. This child has eruption 3 weeks.
30	P. L.	40	F			Adenopathy, rheumatism.
31	B. C.	22	M			Periostitis of tibia, also nodes.
32	L. J.	38	M	15 or 20 years ago.	tubercular, penis and head.	Tubercular eruption developed on forehead when under treatment. Has had dizziness in head.
33	D. F.	21	M		gummy ulcer on face, condylomata on penis.	
34	P. J.	38	M	4 yrs. ago?	squamous, psoriatic.	Tenderness of tibia.
35	M. A.	39	M	3½ yrs. ago	tubercular, eyebrows and knees—mucous patches on tongue.	
36	D. J.	24	M		tubercular, right arm and leg.	
37	R. M.	19	F	1 year ago.	mucous patches, on tongue, upper lip and anus.	
38	P. M.	26	F		rupial.	Syphilitic paralysis, left arm and leg.
39	Mrs. B. E	54	F		tubercular, right leg.	
40	Mrs. S. H.	71	F		gummy ulcer on right ankle.	Has had ulcer off and on for 36 years.
41	V. L.	24	M	Prepuce. Induration present.		
42	S. J.	22	M	Induration present.		
43	H. C.	25	M	6 weeks ago	pustular of scalp.	
44	C. M.	52	F		tubercular, whole of leg—mucous patches on tonsils and pharynx.	Scars of eruption, which were present 13 years ago, now to be seen on shin.
45	W. J.	33	M	2 yrs. ago.	ulcer of tongue.	
46	L. C.	21	M		mucous patches in mouth.	Analgesia well marked.
47	G. J.	40	M	10 days after coitus lasted 6 weeks.		Onychia both thumbs.
48	M. J.	25	M	5 weeks after coitus.	papular, forehead, chin and legs—mucous patches at corner of mouth.	Adenopathy, rheumatism, paralysis, bebetude.
49	Mrs. M. K.	25	F		papulo-pustular.	Been in hospital 5 weeks. Has since had 2 children both of whom are syphilitic. Nos. 50 and 51.
50	M. M.	7 m	F		mucous patches on vulva.	Hereditary syphilis. Daughter of No. 49 and sister of No. 50. Very great improvement under treatment.
51	M. W.	2 m	M		macular, general.	Hereditary syphilis. Son of No. 49 brother of No. 50. Died when 8 mo old.

TABLE 2—PUBLIC CASES.

No	NAME	AGE	SEX	CHANCRE.	OTHER MANIFESTATIONS.	MISCELLANEOUS.
52	D. M.	36	F		tubercular, knee.	Bursitis.
53	C. R.	28	M		tubercular, serpiginous right arm	
54	G. L.	42	F		tubercular, right cheek	
55	B. E.	13¼	M			Hereditary syphilis. Father had nervous syphilis (93, table 1.) Enormous nodes on tibiæ. Frontal eminences prominent. keratitis. Notched teeth. Tenderness of bones.
56	N. A.	25	M	Induration		
57	M. T.	10	F		gummy, ulcer of right leg.	Acquired from chancre on breast of mother who had nursed a strange child. Nodes of both tibiæ.
58	Miss A.	39	F		tubercular, left knee—mucous patches on tonsils.	Sore throat.
59	C. F.	17	M	7 mos. ago.	mucous patches on mouth and anus.	
60	H. P.	26	M		papulo—tubercular.	
61	J. M.	31	F		papular.	Peculiar form.
62	B. M.	35	F		gummy ulcer of knee	
63	S. S.	34	M		papular, scalp.	Eczematiform.
64	Mrs. M. L.	40	F		tubercular, serpiginous left arm.	Eczema of hand.
65	C. D.	47	M		tubercular, right cheek, also under arm and back.	
66	L. S.	31	M	Induration	papular eruption, subsequently	Iritis.
67	F. C.	18½	M		gummy ulcer on leg.	Hereditary ? Had eruption on face when 10 years old. When 13 years had eruption on leg. Cicatrices still to be seen.
68	H. W.	33	M		gummy ulcer on leg.	
69	C. G.	25	M	Induration	roseola.	Sternal tenderness.
70	D. C.	24	M	Multiple.		
71	D. W.	38	M		papular scalp.	Eczematiform.
72	C. F.	27	M	Induration		
73	A. W.	19	M		mucous patches, on lip.	
74	O. J.	25	M		papular scalp.	
75	G. M.	24	M	Induration	papular penis — mucous patches on lip.	Sore throat.
76	W. J.	48	M		tubercular — gummy ulcer.	
77	Mrs. E.	48	F		gummy ulcer on foot.	
78	A. S.	25	F	on lip.		
79	F. P.	31	M		papular.	Adenopathy, pleuritic effusion.
80	B. R.	23	M		mucous patches.	Alopecia.
81	M. P	19	M	1 mo. ago. Induration	papular.	Adenopathy.
82	R. W.	35	M		mucous patches in throat.	

Table 2—Public Cases.

No	Name	Age	Sex	Chancre.	Other Manifestations.	Miscellaneous.
83	C. C.	22	M	5 mos. ago.		Adenopathy, sciatica.
84	H. M.	25	F			Bursitis.
85	H. F.	58	M		papular.	
86	C. W.	33	M	14 yrs. ago.		Adenopathy. Wife had one miscarriage.
87	O. J.	22	M	Induration	mucous patches on tongue and scrotum.	Adenopathy and chancroids.
88	V. J.	20	M	3 mos. ago.	macular.	Adenopathy, sore throat.
89	F. J.	20	M	Multiple. Induration		Adenopathy.
90	Mrs. F.	52	F			
91	Mrs. D. M.	38	F		gummy ulcer on leg.	No miscarriages.
92	Miss W.	20	F		tubercular nose.	Frontal osteitis. Nodes on tibia. Headache.
93	D. T.	35	M	2 mos. ago.	maculopa-pular; mucous patches, tongue	Adenopathy.
94	M. A.	45	F		gummy ulcer on legs.	
95	B. B.	27	M		gummy ulcer on left leg.	
96	M. J.	26	M			Venereal warts, adenopathy.
97	C. M.	27	M	Induration	macular, general—tubercular, subsequently.	Adenopathy, rheumatism, iritis, cough, night sweats.
98	Mrs. M. G.	60	F		gummy ulcer on leg.	Nocturnal pains, dimness of vision.
99	T. G.	21	M	Induration		
100	W. P.	27	M	3 yrs ago.	ulcerative pharyngitis.	
101	S. J.	35	M		gummy ulcer of penis.	
102	Mrs. W.	36	F		tubercular, knee.	Osteocopic pains.
103	M. E.	21	M	Induration	tubercular, thigh.	
104	R. P.	39	M		tubercular, face.	No history of syphilis.
105	M. P.	29	M	Induration		No adenopathy.
106	M. J.	35	M		mucous patches, on glans penis.	
107	F. F.	59	M		gummy ulcer on leg.	
108	Miss B.	24	F		tubercular, face.	Pigmentary of neck, alopecia, miscarriage.
109	F.	20	M		papular; mucous patches in mouth.	Adenopathy. Denies having had chancre.
110	B. W.	21	M	Induration	condylomata.	
111	C. J.	21	M	3 mos. ago.	papular, palms, feet, &c.	Adenopathy, sore throat, alopecia.
112	Mrs. W. E.	19	F			
113	H. J.	24	M	Induration	papular.	

Table 2—Public Cases.

No	Name	Age	Sex	Chancre.	Other Manifestations.	Miscellaneous.
114	D. M.	35	F		tubercular, palms and knees.	Has had 5 miscarriages.
115	D. L.	24	M	Induration		
116	Mrs. B.	34	F		gummy ulcer of back.	Has had miscarriages.
117	A. J.	18	M	Induration		Balanitis.
118	B. J.	21	M			Verruca.
119	R. S.	28	F			Seborrhœa.
120	B. W.	35	F		gummy ulcer on right hip.	
121	G. W.	24	M			Verruca.
122	M.	24	M		papular; condylomata	Adenopathy, rheumatism, iritis.
123	V. M.	18	F	3 mos. ago.	macular; mucous patches in mouth.	Paralysis of palate.
124	N. J.	23	M		papular, general.	Adenopathy.
125	K. M.	38	M		gummy ulcer on leg.	
126	G. M.	16	F		tubercular, knees and elbow.	Osteocopic pains. Mother died of cancer.
127	W. J.	41	M	3 mos. ago.	maculo-papular; mucous patches, throat	Adenopathy.
128	B. A.	32	M	10 yrs ago.	tubercular; gummy ulcers.	
129	I W.	40	M	4 years ago.	gummy ulceration involving penis and scrotum.	No alopecia.
130	M, M.	21	F			
131	V. K.	38	F		tubercular, forehead and thigh.	
132	S. L.	34	M	4 years ago	tubercular, face.	Alopecia.
133	M. J.	24	M	excised.	papular.	Eruption after excision of chancre.
134	Mrs. C.	33	F	9 mos. ago		Alopecia, headache.
135	S. F.	50	M		tubercular, neck and shoulders.	Very peculiar eruption. Wife had no miscarriages.
136	P. W.	7	M		tubercular, side of face.	Hereditary syphilis. Son of No. 149.
137	K. D.	23	M	Induration		
138	W. S.	38	M		papular, hands.	
139	Mrs. P.	65	F		mucous patches on tongue.	
140	A. E.	37	F		gummy ulceration.	
141	C. K.	18	F	2½ years ago.	papulo-tubercular.	
142	Mrs. L.	35	F		tubercular, leg.	
143	W. C.	20	M		tubercular.	Denies all history of infection.
144	N. P.	27	M	Induration	papular.	Adenopathy.
145	P. J.	56	M	Induration		

TABLE 2—PUBLIC CASES.

No	NAME	AGE	SEX	CHANCRE.	OTHER MANIFESTATIONS.	MISCELLANEOUS.
146	P. F.	21	M	Induration	maculo-papular; gummy ulcer on side of tongue—mucous patches on arch of palate.	Adenopathy, analgesia.
147	Mrs. B. M.	39	F			Hygroma.
148	C. J.	30	M	Induration		Adenopathy.
149	P. T.	42	M	8 yrs. ago.		Father of No. 136. Dizziness, diplopia, pearly condition of mouth, no eruption, no rheumatism.
150	M. J.	35	M	Induration	maculo-papular; gumma of upper lip.	Adenopathy.
151	Mrs. W. E.	45	F		papular, squamous.	
152	P. G.	28	M			Cephalalgia.
153	W. J.	34	M	Induration	macular.	Adenopathy, hygroma.
154	Y. T.	28	M	Multiple. Induration		Adenopathy.
155	M. T.	23	M	2 yrs. ago. Induration	mucous patches at corner of mouth.	Adenopathy.
156	F. P.	32	M	1½ yrs. ago		
157	J. W.	40	M		tubercular.	
158	Mrs. M. H.	36	F			Bursitis right knee. Has had miscarriages. Husband has an eruption.
159	D. J.	23	M	Doubtful.	maculo-papular; mucous patches on upper lip.	Adenopathy, sternal tenderness.
160	D. J.	49	M			
161	K. M.	35	M			Tenderness of tibia.
162	Mrs. M. M.	30	F		tubercular, upper lip.	Miscarriages.
163	W. J.	29	M	14 yrs. ago.	gumma on arm.	
164	Mrs. M.	27	F			Mother of Nos. 165 and 166. Rheumatism, nodes on tibia and scarring, alopecia, sore throat.
165	M. L.	4	F			Daughter of No. 164, and sister of No. 166. Hereditary syphilis, onychia.
166	M. E.	9 m	M			Hereditary syphilis, onychia. Son of No. 164 and brother of No 165.
167	M. J.	24	M	Induration	papular, general—mucous patches, throat	Rheumatism, very severe sore throat.
168	M. F.	18	M	4 mos. ago.	papular, elbows—mucous patches on lips.	
169	K. L.	23	M	Induration		
170	K. J.	20	M	Induration		
171	W. F.	26	M	Induration present.	papular, chest.	Adenopathy
172	F. S.	23	M	Induration	papular, general—mucous patches, tongue	
173	Mrs. H.	26	F		tubercular, forehead and face.	

TABLE 2—PUBLIC CASES.

No	NAME	AGE	SEX	CHANCRE.	OTHER MANIFESTATIONS.	MISCELLANEOUS.
174	L. C.	30	M		macular.	
175	D. E.	20	M	Urethral.	macular — mucous patches in mouth.	Adenopathy.
176	Mrs. B. C.	26	F		papular, leg.	
177	D. F.	35	M			Had syphilis in 1863. Neuralgia. No other signs of syphilis.
178	T J.	31	M		ulcerating syphilidê	Rheumatism, nodes, sciatica.
179	F. J.	19	M	Induration		
180	S. W.	19	M	3 mos. ago.	papular, general—mucous patches, mouth	Alopecia.
181	R.	29	M		mucous patches in throat.	Nodes on ribs.
182	M. J.	24	M		papular.	
183	Miss R. M.	42	F		gummy ulceration on knee.	Tenderness of tibiæ.
184	A. R.	21	M	Induration		
185	H. J.	27	M	1 year.	papulo—tubercular.	
186	H. T.	12	M			
187	C. P.	37	M	8 mos. ago.		
188	Miss H. L.	22	F		tubercular, forehead.	
189	M. P.	26	M			Venereal warts.
190	F. J.	25	M	1½ yrs. ago	papular, general—mucous patches on left tonsil.	Adenopathy.
191	H. J.	26	M	2¼ yrs. ago?	gumma on uvula.	Adenopathy.
192	R. H.	26	M		erythematous — mucous patches in throat.	Adenopathy.
193	M. J.	25	M	3 mos. ago.	mucous patches in mouth.	Adenopathy.
194	A. P.	59	M		gumma of palate.	
195	C. J.	30	M	Induration		Adenopathy.
196	Mrs. S.	43	F		gummy ulcer of leg.	
197	G. H.	34	M		tubercular, scarring.	
198	C. G.	31	M	10 yrs. ago.	gumma of cheek.	Loss of hair, ozæna, strabismus.
199	H. J.	20	M		pustular left leg.	Deafness.
200	K. D.	35	M		tubercular, face.	No history of infection.
201	M. V.	33	M		papular, nose.	
202	N. D.	23	M	7 years ago.	erythematous.	
203	G. A.	28	M	5 wks. ago.	erythematous.	Adenopathy.
204	S. J.	55	M		gummy, lip.	
205	D. J.	18	M	Multiple.	mucous patches on lip and mouth.	
206	F. J.	24	M		papular, knee and penis.	

TABLE 2—PUBLIC CASES.

No	Name	Age	Sex	Chancre.	Other Manifestations.	Miscellaneous.
207	M. J.	39	M			
208	G. E.	24	M		macular—mucous patches in mouth.	Adenopathy.
209	C. J.	37	M	8 mos. ago.		Sore throat.
210	Mrs. F.	51	F		papulo - squamous palmar.	No history of infection.
211	Miss B. A.	31	F		papulo - squamous plantar.	
212	B. R.	21	M	1 mo. ago.	papular, general.	Adenopathy.
213	M. J.	21	M	6 days ago, induration		
214	C. T.	34	M	18 yrs. ago.	gumma of testicle.	
215	M. W.	26	M	Induration		
216	C. E.	40	M	6 mos. ago.	pustulo - tubercular.	Jaundice.
217	G. M.	28	F	Induration	tubercular, forehead.	Sterility.
218	T. L.	48	M	3 wks ago, induration	papular, body.	Adenopathy.
219	G. J.	25	M	Induration		Adenopathy.
220	R. J.	28	M	Induration	mucous patches in throat.	
221	M. J.	17	M	Induration	papular, penis.	Adenopathy.
222	B. P.	32	M	4 years ago		Nodes of tibia.
223	S. A.	26	M	1 year ago.	mucous patches on left tonsil.	
224	H. J.	32	M	4 years ago.	tubercular, hand and arm.	Rheumatism.
225	S. E.	30	M	3 years ago	gumma, penis and inguinal region.	
226	V. W.	23	M	6 mos. ago.	papular, buttocks and legs.	Adenopathy.
227	Mr. P.	54	M		papulo-squamous.	Iritis ?
228	Mrs. D.	26	F		papular, sole of foot.	
229	Mrs. G. M.	30	F		papulo-squamous.	
230	S. W.	32	M	3 mos. ago, induration		
231	Mrs. R. S.	46	F		papulo-squamous.	
232	H. R.	27	M		macular, erythema.	
233	H. E.	27	M	Induration		
234	Mrs M. C.	32	F		tubercular, nose.	All children died; one syphilitic.
235	C. S.	34	M	1 year ago.	macular, general	
236	M. T.	24	M		papular.	
237	C. M	4 $\frac{1}{12}$	F			Hereditary syphilis. Mother had no miscarriages.
238	T. J.	25	M	6 months	papulo-tubercular.	No rheumatism. Sore throat.

TABLE 2—PUBLIC CASES.

No	NAME	AGE	SEX	CHANCRE.	OTHER MANIFESTATIONS.	MISCELLANEOUS.
174	L. C.	30	M		macular.	
175	D. E.	20	M	Urethral.	macular — mucous patches in mouth.	Adenopathy.
176	Mrs. B. C.	26	F		papular, leg.	
177	D. F.	35	M			Had syphilis in 1863. Neuralgia. No other signs of syphilis.
178	T. J.	31	M		ulcerating syphilidê	Rheumatism, nodes, sciatica.
179	F. J.	19	M	Induration		
180	S. W.	19	M	3 mos. ago.	papular, general—mucous patches, mouth	Alopecia.
181	R.	29	M		mucous patches in throat.	Nodes on ribs.
182	M. J.	24	M		papular.	
183	Miss R. M.	42	F		gummy ulceration on knee.	Tenderness of tibiæ.
184	A. R.	21	M	Induration		
185	H. J.	27	M	1 year.	papulo—tubercular.	
186	H. T.	12	M			
187	C. P.	37	M	8 mos. ago.		
188	Miss H. L.	22	F		tubercular, forehead.	
189	M. P.	26	M			Venereal warts.
190	F. J.	25	M	1½ yrs. ago	papular, general—mucous patches on left tonsil.	Adenopathy.
191	H. J.	26	M	2½ yrs. ago?	gumma on uvula.	Adenopathy.
192	R. H.	26	M		erythematous — mucous patches in throat.	Adenopathy.
193	M. J.	25	M	3 mos. ago.	mucous patches in mouth.	Adenopathy.
194	A. P.	59	M		gumma of palate.	
195	C. J.	30	M	Induration		Adenopathy.
196	Mrs. S.	43	F		gummy ulcer of leg.	
197	G. H.	34	M		tubercular, scarring.	
198	C. G.	31	M	10 yrs. ago.	gumma of cheek.	Loss of hair, ozæna, strabismus.
199	H. J.	20	M		pustular left leg.	Deafness.
200	K. D.	35	M		tubercular, face.	No history of infection.
201	M. V.	33	M		papular, nose.	
202	N. D.	23	M	7 years ago.	erythematous.	
203	G. A.	28	M	5 wks. ago.	erythematous.	Adenopathy.
204	S. J.	55	M		gummy, lip.	
205	D. J.	18	M	Multiple.	mucous patches on lip and mouth.	
206	F. J.	24	M		papular, knee and penis.	

TABLE 2—PUBLIC CASES.

No	NAME	AGE	SEX	CHANCRE.	OTHER MANIFESTATIONS.	MISCELLANEOUS.
207	M. J.	39	M			
208	G. E.	24	M		macular—mucous patches in mouth.	Adenopathy.
209	C. J.	37	M	8 mos. ago.		Sore throat.
210	Mrs. F.	51	F		papulo - squamous palmar.	No history of infection.
211	Miss B. A.	31	F		papulo - squamous plantar.	
212	B. R.	21	M	1 mo. ago.	papular, general.	Adenopathy.
213	M. J.	21	M	6 days ago, induration		
214	C. T.	34	M	18 yrs. ago.	gumma of testicle.	
215	M. W.	26	M	Induration		
216	C. E.	40	M	6 mos. ago.	pustulo - tubercular.	Jaundice.
217	G. M.	28	F	Induration	tubercular, forehead.	Sterility.
218	T. L.	48	M	3 wks ago, induration	papular, body.	Adenopathy.
219	G. J.	25	M	Induration		Adenopathy.
220	R. J.	28	M	Induration	mucous patches in throat.	
221	M. J.	17	M	Induration	papular, penis.	Adenopathy.
222	B. P.	32	M	4 years ago		Nodes of tibia.
223	S. A.	26	M	1 year ago.	mucous patches on left tonsil.	
224	H. J.	32	M	4 years ago	tubercular, hand and arm.	Rheumatism.
225	S. E.	30	M	3 years ago	gumma, penis and inguinal region.	
226	V. W.	23	M	6 mos. ago.	papular, buttocks and legs.	Adenopathy.
227	Mr. P.	54	M		papulo-squamous.	Iritis ?
228	Mrs. D.	26	F		papular, sole of foot.	
229	Mrs. G. M.	20	F		papulo-squamous.	
230	S. W.	32	M	3 mos. ago, induration		
231	Mrs. R S.	46	F		papulo-squamous.	
232	H. R.	27	M		macular, erythema.	
233	H. E.	27	M	Induration		
234	Mrs M. C.	32	F		tubercular, nose.	All children died; one syphilitic
235	C. S.	34	M	1 year ago.	macular, general	
236	M. T.	24	M		papular.	
237	C. M	4 3/12	F			Hereditary syphilis. Mother had no miscarriages.
238	T. J.	25	M	6 months	papulo-tubercular.	No rheumatism. Sore throat.

TABLE 2—PUBLIC CASES.

No	NAME	AGE	SEX	CHANCRE.	OTHER MANIFESTATIONS.	MISCELLANEOUS.
239	P. J.	32	M		papulo-squamous.	
240	D. W.	23	M		papulo-squamous.	
241	B. J.	19	M	slight induration.		
242	H. T.	36	M		gummy ulcer on head.	
243	M. G.	23	M	Induration	mucous patches, condylomata.	
244	N. E.	42	M		tubercular.	
245	S. E.	19	M	1 year ago.	maculo-papular.	
246	Mrs. L.	24	F		papulo-tubercular.	
247	Mrs. G. J.	29	F	3 yrs. ago.	papulo - tubercular — mucous patches in mouth.	
248	L. S.	17	M		tubercular.	
249	H. A.	26	M	lower lip.	mucous patches on lips.	Adenopathy.
250	Mrs. M.	44	F		papulo-tubercular.	
251	W. P.	24	M	5 wks. ago.	maculo-papular.	Adenopathy.
252	S. J.	24	M	2 months.	macular.	Adenopathy : rheumatism.
253	L. J.	26	M	14 mos. ago	squamous.	Rheumatism.
254	F. J.	26	M	3 wks. ago; induration	papular.	Alopecia ; adenopathy.
255	M. A.	24	F		tubercular, left hand.	
256	Miss. B. L.	23	F		maculo-papular.	
257	M. W.	33	M		maculo-papular.	
258	R. H.	21	M	Induration		Adenopathy.
259	Mrs. C. M.	28	F		gummata, knee and shoulder.	
260	B. J.	26	M	2 yrs. ago.	papular, general.	
261	Mrs. O. A.	17	F		papular.	
262	F. M.	21	F		maculo-papular.	
263	P. J.	26	M		maculo-papular.	
264	E. J.	22	M		macular.	
265	B. J.	21	M			
266	Mrs. S. E.	40	F		tubercular, left cheek.	Miscarriages.
267	K. C.	25	M	Induration		
268	S J.	32	M	Induration		
269	G. C.	21	M	Induration present.	mucous patches in throat.	Adenopathy.
270	O. J.	22	M		papular.	
271	F. M.	59	F		tubercular, cheek and arms.	

TABLE 2—PUBLIC CASES.

No.	NAME	AGE	SEX	CHANCRE.	OTHER MANIFESTATIONS.	MISCELLANEOUS.
2	B. W.	21	M	3 mos. ago.	macular, general.	
3	L. E.	20	M		gumma of penis.	
4	E. L.	24	M	Induration	papular—mucous patches in mouth.	
5	W. W.	24	M	1 year ago.	vesicular.	Adenopathy.
6	H. J.	32	F		gumma, throat.	
7	B. W.	22	M	Induration		
8	C. M.	45	F		gummy ulceration.	
9	H. A.	20	M	Induration		
30	G. S.	30	M	Induration		
31	C. T.	20	M	7 wks. ago; induration	maculo-papular.	
32	——	25	F		tubercular.	
33	——	5/12	M		mucous patches on scrotum.	Hereditary syphilis.
34	M. J.	25	M		maculo-papular.	Adenopathy.
35	D. C.	19	M	multiple, induration felt.		Adenopathy.
36	K. A.	35	M	2 mos. ago.	papular.	Adenopathy; sore throat.
37	H. S.	22	M	4 mos. ago.		Alopecia.
38	J. J.	58	M		gummy ulcer on leg.	Rheumatism. Wife had 2 or 3 miscarriages.
39	Mrs. G. E.	38	F		tubercular, feet.	Sternal and tibial tenderness. Rheumatism.
90	M. D.	27	M	Induration present.	papulo-pustular.	Adenopathy. Analgesia.
91	S. M.	10/12	M		mucous patches on scrotum.	Hereditary syphilis.
92	S. J.	22	M		papular, disseminate.	
93	M. A.	42	F		gumma, throat.	
94	Mrs. G. W.	50	F		papulo-tubercular.	
95	S. N.	42	M	16 yrs. ago.	gumma, eyebrows.	Wife has had no miscarriages.
96	Mrs. G. E.	36	F			
97	D. M.	27 wks.	F		macular, erythema.	Hereditary syphilis.
98	M. T.	23	M	Induration		
99	C. J.	30	M	7 yrs. ago?	papular, forehead—mucous patches on lip.	Adenopathy; alopecia; sore throat.
00	M. J.	49	M	2 or 3 years ago?	papular.	Alopecia; tenderness of bones; no adenopathy.

RARE CASES OF CONGENITAL SYPHILIS.

BY

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RARE CASES OF CONGENITAL SYPHILIS.

I. Two cases of *dactylitis syphilitica*, and one of *dactylitis non-syphilitica*.

While numerous observers are reporting instances of dactylitic disease in later years, there are few clinical histories to be found of its occurrence in very early life; for that reason I wish to put the following on record:

Case I.—Mary Smith, aged two years and nine months, first seen by me March 18, 1873, is a pale, pasty-complexioned child with light skin and hair; she is very deficient in talking, saying only one or two words, but appears quite bright to understand all that is said to her.

When about three months old, i. e., two years and a half ago, a swelling was noticed in the right cheek near the angle of the jaw, which, from being small at first, gradually enlarged, and finally broke and discharged for a while, leaving a somewhat depressed cicatrix not adherent to the bone, and but little discolored. About eighteen months ago, when the child was fifteen months old, an enlargement began to form on the external part of the top of the left foot, which softened and discharged in about two months. Shortly after this a somewhat similar development occurred about the external malleolus of the right foot, which likewise opened in a month or two. About the same time, i. e., eighteen months ago, the left thumb began to enlarge in its first phalanx, and shortly after the same portion of the first finger of the same hand;

these enlargements have remained ever since with no variation except gradual increase for a time, and latterly a slight discharge from an opening on the outer side of the finger. About a year ago the first metacarpal bone of the right forefinger underwent a similar enlargement, softened, and has continued to discharge since.

Present Condition.—Child in fair general health, but she seldom goes in the open air; her appetite, however, is good, and her bowels regular. She formerly slept well, but of late is

FIG. 1.

much worried at night by pains in the hands and feet. She has never had any eruptions on the body other than those mentioned, and no further signs of syphilis are visible, save the left eye bears marks of an old interstitial keratitis; the teeth are not notched.

Left Hand.—Thumb and forefinger are the seat of a well-marked *dactylitis syphilitica*. The first phalanges of both are found to be greatly enlarged and somewhat reddened, presenting a firm resistance to pressure, which causes little or no pain. On close inspection the swelling is found to involve only the first phalanges of both, beginning at the metacarpal extremity, enlarging to about the centre of each, and again tapering to the point of articulation with the second phalanx. The ends of the second phalanges are somewhat swollen, but the articulations are perfect, and it is difficult to determine whether they are involved or not. The measurements of the thumb and finger of the well and affected hands are: Diseased hand—circumference of forefinger, $2\frac{5}{8}$ inches; circumference of thumb, $2\frac{3}{8}$ inches. Healthy hand—circumference of fore-finger, $1\frac{1}{2}$ inch; circumference of thumb, $1\frac{5}{8} + \frac{1}{16}$ inch. Difference in circumference of fingers, $1\frac{1}{8}$ inch; difference in thumbs, $\frac{11}{16} = \frac{1}{2} + \frac{3}{16}$ inch. Some superficial fluctuation is felt in the diseased part of the finger, and some discharge occurs from an opening on the outer aspect, but the mass of the affected finger and thumb is firm and solid. These changes are well shown in Fig. 1, drawn from a plaster cast taken April 16, 1873.

Right Hand.—About the middle of the first metacarpal bone of the right hand there is a depressed ulceration which is painful and discharging, the margin of the sore being attached to the bone. The bone appears enlarged above and below the opening and laterally along its whole length, as a general dactylitis of this bone with this one point of softening in it; the whole bone is somewhat tender on pressure.

Feet.—The whole left foot is moderately swollen, but its fourth and fifth metatarsal bones can be made out to have undergone the same thickening as in the hands. On the top of the foot, one inch to the left of the median line, and about midway from toes to ankle, there exists an excavated ulcer $\frac{1}{8} \times \frac{1}{4}$ inch in diameter, with slightly-depressed edges, from which issues a sero-purulent discharge. Around this there is a circle of erythematous redness an inch in diameter. On the right foot two depressed ulcerations surrounded by thickened masses, evidently tubercular syphilitic infiltration, are seen over the external malleolus. They do not appear to involve

April 16th.—The ulcerations on the feet are about healed; the patient can walk very well and has gained greatly in appearance, looking more healthy and brighter. The dactylitis of left thumb and finger is unaffected, except that the discharge has ceased from the opening of the finger, and there is a scab over it and the other ulcerations.

28th.—General condition still improving; is much brighter and livelier. The ulcerations have closed, but the finger and thumb of the left hand appear a trifle larger than when first seen; actual measurement makes them so, the circumference of forefinger being $2\frac{7}{8}$ inches against $2\frac{5}{8}$ inches of March 18th, and that of the thumb $2\frac{1}{2}$ inches, the circumference of the latter on March 18th being $2\frac{3}{8}$ inches, i. e., an increase of $\frac{1}{4}$ inch for the finger and $\frac{1}{8}$ inch for the thumb. The internal treatment has been continued.

The mother has decidedly improved under anti-syphilitic treatment. She does not have the epileptiform seizures so frequently, and appears much better and clearer-minded.

January 31, 1874.—The treatment was continued for a few months, and then omitted until about three weeks ago, when it was resumed, and now the friends think the child moves the finger and thumb better than before, and she seems brighter than she has been for months. She is still very backward, saying only half a dozen words, although nearly four years old. Measurement to-day makes the circumference of the affected finger $2\frac{1}{2}$ inches, while the corresponding finger of the right hand now measures $1\frac{3}{4}$ inch, a difference of only $\frac{3}{4}$ inch, the healthy one having grown $\frac{1}{4}$ inch, and the diseased one diminished $\frac{1}{8}$ inch in circumference. The thumb of the sound hand has increased $\frac{3}{16}$ inch in circumference, the dactylitic thumb remaining the same, $2\frac{3}{8}$ inches around. The right forefinger is found to have shortened $\frac{1}{4}$ of an inch, and the thumb $\frac{3}{4}$ of an inch, measuring from the internal condyle with the hand supinated. The mother has certainly improved under the specific treatment.

Remarks.—This case was exhibited before the New York Dermatological Society, April 1, 1873, and its peculiarities commented on. It is not a little remarkable that the effects of the syphilitic poison should be so marked in the child and

leave no trace on the mother; that the virus should have passed thus directly to the offspring, leaving the medium of communication untouched, for, on closest investigation both by the members of the Society and in private, no history can be made out at all implicating the mother. Again, the father, although, it is true, we could learn but little of his history, gave but little clue as to the source of infection, except the pains in the tibiæ during the last year of his life, just before and after the birth of the child. That he died of consumption is rather in favor of his having syphilis at the time, as the depressing effect of the specific disease is to hasten death in patients laboring under phthisis. So far, then, as the evidence goes, it is decidedly in favor of the direct paternal origin of the infection to the child, although it is always within the limits of possibility for the mother to have suffered so slightly from the later effects of the poison as to have passed them by unnoticed. This latter seems more probable, as, in the excellent review of the alleged cases of paternal transmissibility, by my friend Dr. Sturgis, in the New York Medical Journal, July, 1871, and July, 1873, the view is supported by a great mass of evidence, that it is absolutely necessary for the mother to have received the poison herself in order to transmit it to offspring, and that the procreative act alone is not sufficient to convey infection to the ovum. That the lesions observed in the child are not the result of acquired syphilis is highly probable, because of their very early appearance, at three months of age, and then in the form usually observed by later manifestations.

We can hardly attribute the epileptiform convulsions of the mother to syphilis, inasmuch as they have existed seventeen years, and in the mean time she has borne five other children who are all living and healthy, and has never had any miscarriages. It seems probable, then, that the mother became affected just before or after conception, and that, as pregnancy often acts in holding a disease in check, as in the case of phthisis, so in this case, syphilitic manifestations on the part of the mother were hindered, the poison being concentrated in the child, as a result of the normal determination of the life-forces to the uterus and its contents during this period. That the mother had no later evidences of specific disease can be explained by

the fact that the exanthematous disorder, syphilis, ran its full course during the nine months of gestation, while the subsequent influence of the virus may have been directed toward the already diseased nervous system of the mother, for her epileptiform seizures had been increased latterly in frequency, and her mind has been becoming weaker, in both of which respects she has improved under anti-syphilitic treatment.

Case II.—Lena Kurth, aged five weeks, was brought to me July 17, 1873, when the following conditions were noted: The child is pale and pinched-looking, with that peculiar peaked look of the face belonging to children suffering from hereditary syphilis, that is, the nose seems unnaturally prominent and the skin drawn back from it on every side, even the forehead and chin appearing to recede. No marks of syphilitic disease are seen on the child, except a coryza which has existed from birth, and a specific enlargement on the right hand. This *dactylitis syphilitica*, which was noticed shortly after birth, involves only the first phalanx of the right thumb, commencing at its metacarpal articulation and extending through its whole length, the thumb then tapering quickly in its second phalanx. The joint is quite movable. The skin over the affected part is of a purplish-red color; there is no superficial ulceration; moderate handling and pressure give no pain. There is also paronychia of the same thumb.

History of Mother.—The mother presents us with a most exquisite example of an ulcerating tubercular syphilide on the face, right forearm, and right foot. The masses on the face are grouped principally about the nose and lips, are but little ulcerated, but cause a very unsightly appearance. On the right forearm there is a hard patch, about an inch and a half in diameter, nearly circular, with one or two ulcerations, and the rest of the surface covered with scales. The disease on the right foot occupies about the middle of the sole, and consists of a hard, tubercular mass, slightly elevated and causing much pain in walking. The mother has been under my care for the past six months, but has been somewhat irregular in her treatment, and the syphilide has proved very rebellious. She continued anti-syphilitic treatment up to delivery; she nurses her baby exclusively.

History of Father.—Nothing is known of the father, save that he lived an irregular life, and the disease of the mother was from the first charged directly to him.

The mother is placed again on a mixed treatment, which she had discontinued for a period, from neglect, and the child is given mercurial inunctions in addition.

January 9, 1874.—The patient continued the treatment for several months, and the dactylitis has entirely disappeared; the date of its disappearance was not noted, but the thumb has seemed entirely natural for two or three months past. Measurement shows the circumference to be the same as that of the healthy thumb, but, on careful comparison, the member is found to be shortened from one-twelfth to one-eighth of an inch. The child appears perfectly well, and has lost the pinched look. The mother has again neglected treatment for a month, and the tubercular syphilide, which had vanished almost entirely under its continuance, has relapsed with increased vigor; the sole of the foot is now deeply ulcerated and very painful. Ordered to return to mixed treatment, apply iodoform ointment to the foot, and wean the child.

March 5th.—No further syphilitic manifestations, the child remains perfectly well.

Remarks.—The peculiarly interesting feature of this case is the very early period at which the bone-trouble manifested itself, namely, at or very shortly after birth—the disease being fully developed in the fifth week—and this is, therefore, as far as I can learn, the earliest case of the disease on record. The ready disappearance of the lesion under appropriate treatment teaches also the necessity of early making a correct diagnosis, in which respect the case contrasts forcibly with the preceding, where a more or less persistent course of treatment for nearly a year not only effected no reduction in size, but did not even prevent the diseased bones from enlarging.

Case III.—In contradistinction to the above two cases of dactylitis of syphilitic origin, I wish to present the following case of dactylitic inflammation which closely resembles them, but which, after very carefully going over the case with my friend Dr. R. W. Taylor, and examining the father and

mother together, is, I think, clearly to be regarded as of traumatic origin, fostered and developed by a scrofulous habit of body.

Patrick Mooney, one year and ten months old, was brought to me at the Central Dispensary, January 29, 1874. The child is fairly developed, light-complexioned, and with a generally scrofulous look, with eczema of the upper lip and a running from the ear, which has existed for some months and is occasionally offensive. The child nurses in part yet. No history

Fig. 2.

of syphilis can be obtained, and the little patient bears no marks of disease except those mentioned and the dactylitic affection to be described.

Present Appearance.—The little finger of the right hand (*see* Fig. 2) is seen to be the seat of a marked swelling which involves the first phalanx in its whole extent, and gives the appearance also of an enlargement of the second phalanx, which,

however, remains free as firm pressure just beyond the joint reveals that portion of the finger of normal size. The swelling tapers from the metacarpo-phalangeal articulation to that between the second and third phalanges, the third being of normal size. The diseased finger measures in its greatest circumference two and three-eighths inches, the corresponding healthy finger of the left hand, one and a quarter inch. The joints are movable, the motion between the finger and the hand, however, being limited. The color of the affected finger is of a purplish red, and the surface shiny, but of a more translucent appearance, and not so brownish as the syphilitic cases. The sensation on pressure is of pretty firm cartilage or harder, as no impression can be made on it; moderate pressure causes no pain. On the outer or ulnar aspect of the finger there is a very small transverse opening, with edges slightly pouting, whence issues a very slight sanious discharge, and from which small particles of bone came a month or more ago.

History of Lesion.—About six months ago the mother first noticed a slight swelling of the finger on the upper and outer aspect, which she thinks was caused by a boy stepping on it. There was no discoloration, and the part gave no pain. This swelling gradually increased, spreading around the whole phalanx, and about two months ago was lanced by a physician on the outer aspect. No pus came out, only a little blood, and this opening has remained, discharging a little watery matter since.

History of Parents.—The mother is a very large, fleshy woman, with three other healthy children. She gives no history at all indicating syphilis; has had two miscarriages, but they were from hard work, and ten years apart, with a healthy boy between. No evidence, past or present, can be found of any syphilitic disease in the father; he is a large, powerful laboring-man, aged thirty, and this is his first child, he being the woman's second husband.

One month after the above note, the child was seen again; it had improved greatly in health and appearance under cod-liver oil and iodide of iron, with a little iodide of potassium; but the finger remained about the same. A piece of honey-combed bone had just come away, about the size of a large

grain of wheat, a little shorter. The orifice was still discharging the serous fluid; the color of the finger had paled.

Remarks.—This lesion resembled that produced by syphilis so closely, that a number of my friends, to whom I showed the case, called it at once *dactylitis syphilitica*, and it was only after a most searching examination that we were able to exclude the specific origin of the trouble. The reasons for so doing were as follows: Total absence of any syphilitic evidence in either father, mother, or child; the fact, that with the disease commencing at the age of sixteen months, it would pretty certainly be preceded or accompanied by some other manifestations of the poison, whereas none could be made out; the pale, scrofulous appearance of the child, due perhaps to the prolonged lactation, confinement and improper feeding, including the giving the breast every time it cried, etc.; the other evidences of a low state of system, the eczema under the nose, and the otorrhœa; and, finally, points to which Dr. Taylor called my attention: the clear, translucent color of the skin, and the fact that syphilitic dactylitis of the little finger is very rare; and that the origin and the present opening in the skin were on the ulnar or outer aspect, just where an injury would be most readily received, from a blow, or, as was suspected in this instance, a step with the foot, while the child, aged sixteen months, was creeping on the floor. The sinus discharging carious bone in this case is in striking contrast to the superficial ulceration in the first case, which healed completely under treatment.

Acquired syphilis is to be excluded also on the above grounds.

I have gone over these points somewhat fully, because the cases here given assist in demonstrating that, while there is a dactylitis of syphilitic origin, there is also one where no taint exists, and that these, moreover, resemble each other so closely, that the diagnosis can be determined only after the most thorough investigation, which may in a measure account for the discrepancy of views entertained as to the frequency of syphilitic dactylitis,[1] especially in young children.

Case IV. *Syphilitic Pemphigus.*—J. C. B., aged six months, came under my care January 20, 1872, when the fol-

lowing history was obtained: At birth the feet were found to be very sore and raw, as from broken blisters, and very soon after birth they became covered with bullæ; the same developed also on the body within a week later, and the hand soon after became affected. These bullæ have continued to form for six months, so that every part of the body has at times been invaded by them. The mouth from the first has been so sore that he has never been able to nurse, but has taken nourishment from a bottle.

Present Condition.—The child presents the characteristic appearances of congenital syphilis; the entire integument is of a dull, earthy hue, the cachexia marked, with a withered, shrunken condition of the skin of the whole body, as if much too large for the child, but still stretched over prominent portions; there is also a peculiar expression of premature old age, indicative at the same time of much suffering, and the voice is entirely unnatural, there being considerable hoarseness, together with a shrill cry.

The feet appear deformed, the great-toes being drawn quite to one side, partly by cicatricial contraction, although the condition is in part congenital. About the sides of the feet and on the sides of the trunk are bullæ of varying size, and raw, excoriated spots, the location of ruptured blebs. The mouth is very sore, and, on inspection, the tongue and whole buccal cavity are seen to have been the seat of a bulbous eruption, the surfaces being raw, with detached portions of membrane adherent here and there.

The little sufferer has since birth been undergoing various measures intended for his relief, but almost every thing aggravates the trouble. Zinc-ointment irritates, also stramonium-ointment. Has been taking hydrarg. cum creta for several weeks, also ol. morrhuæ.

Ordered: Continue the gray powder, taking five grains morning and evening, and ℞. Pot. iod. ʒj, vin. ferri dulc., aquæ, āā ℥ij. M. Teaspoonful three times daily, and apply to sores ℞. Calomel grs. x, cucumber-ointment ℥j. M. Continue the cod-liver oil, a drachm daily.

February 10th.—Child is doing fairly; the bullæ develop less abundantly, and the child seems more comfortable. The ointment is very soothing. The child has a cough.

12*th.*—Pneumonia of the right side has developed, but the physical signs are masked by continual moaning. Ordered to stop powders and mixture, and apply hot poultices, and take malaga wine freely.

15*th.*—The pneumonia is better, breathing easier, lividity of countenance less. Takes nourishment fairly; pulse 114.

28*th.*—Child is improving constantly; there is much less formation of bullæ, and the general aspect has improved. Has returned to the specific treatment.

April 17*th.*—The disease still progresses slowly, new bullæ appearing from time to time. There are now several large ones about the body, one on the left elbow, and one just broken on left foot. The hands are red and scaling, the nails being lost from the left hand. The gray powders fail to keep the bowels open. Ordered: ℞. Hyd. chlor. mitis ʒss, sacch. alb. pulv. ʒj. M. Div. in pulv. No. xx. Take one morning and night. ℞. Potass. iod. ʒj, vin. ferri dulc., syr. lacto-phosphat. comp., āā ℥j. M. Take one teaspoonful after eating.

27*th.*—The child is manifestly better. The *facies* has improved and much of the withered, old look is gone. There has been but one new blister formed since last note, and that on the elbow. The mouth is better. Bowels much constipated; return to hydrarg. cum creta in double dose. The child has been having marked intermittent fever, for which he is ordered quinine.

July 1*st.*—The child being from the country, was not seen again after the last note, but is reported to have died a day or two ago. There was no acute disease, but life appeared to succumb to the long-continued action of the syphilitic poison, and the strength to have gradually passed away, with no new manifestation of disease.

Remarks.—The interesting features in this case are, the length of time which the eruption continued to develop, although controlled to a considerable degree by the antisyphilitic treatment employed, also the length of time which the child lived, namely, one year, whereas children born with syphilitic pemphigus, as this one was, usually survive but a very short time. The father of the child had a venereal ulcer eight or nine years ago, was treated with mercury and iodide

syphilitic history can be made out, nerve-disorder about the back and right Sigmund thinks probably not of specific but very little if any benefited and latterly by large doses of iodide of perfect health, and has never having had syphilis, and has further a five years of age. As in the first case of given, the poison seems to have been here to the offspring, and to have developed sparing the parents. The child was seen D. Bulkley, who fully confirmed the syphi- Whether the lung-trouble arose from disease of the mouth through the trachea impossible to say; more probably, however, disease of the lungs, as in the case next

Disease of the Lung.—The following under the above title because of the very antecedents of the child, its own evident in its general appearance, the absence of signs, and its evident improvement for a treatment. It is greatly to be regretted not attainable in this or the preceding

and ten days old, when first brought to 22, 1873, presented only symptoms of there was no dulness on percussion in any auscultation revealed hard breathing over occasional coarse mucous *râles*. The days previously; the child did not cough ordered an oil-silk jacket and one with two of syrup of ipecac. every two or child appeared in very good condition, was given to the case.

days after, it was again seen consider- The little patient now wore a the eyes were dull, and the whole ap- from some general depressing in-

fluence. The cough had not improved, but had become gradually worse, the distress in breathing being very great at night, the child remaining awake most of the night, and coughing very frequently. Examination of the throat shows some ulceration on right tonsil, and on the roof of the mouth numerous opaline patches. Auscultation reveals harsh bronchial breathing all over both lungs, in front and behind, with a few coarse *râles*. Very slight dullness on percussion over all. The child throws back the head, distressed for breath. No other syphilitic history can be obtained; there has never been any eruption; the child has previously enjoyed good health; no snuffles; nurses entirely.

History of the Father.—The father has been under my care for syphilis during the past two years and more. He had the primary sore six months previous to my seeing him; said by his physician to be a urethral chancre, accompanied by swelling in the left groin, which did not suppurate. This was followed by a well-marked train of symptoms of constitutional syphilis, a maculo-papular rash over the whole body, sores in the head, nocturnal rheumatism, and loss of hair, even of eyebrows and lashes, ulcerated sore-throat and nodes on the shins, together with mucous patches about the anus, and piles. These disappeared quite promptly on the mixed treatment, the sore-throat and rheumatism returning from time to time, to yield at once again to specific remedies.

History of the Mother.—One year ago the mother came under my care with aching of the bones at night, and well-marked syphilitic sore-throat, thinning of the hair, and with pain on pressure over the long bones. Her general health, which was poor, improved vastly, and all the specific symptoms vanished very shortly after commencing a course of treatment of mercury and iodide of potassium combined. She had been delivered just previously of a dead child at full term.

Considering the histories of both parents as I had before recorded them, and the general aspect of the child, together with the state of the mucous membrane of the mouth, I was forced to regard the lung-trouble as syphilitic, and the laryngeal difficulty shown by a croupy cough, with throwing back the

differed materially from those commonly observed in the ordinary lung-affections of very young children. I will not here enter upon the pathology, as the article by Wilson Fox on "Syphilitic Affections of the Lung" in "Reynolds's System of Medicine" embraces, I believe, the observations of others to a very great degree, and he truly says: "The manner in which the tissue of the lung may be affected by the syphilitic poison, although it has been made the subject of much recent research, still requires a more accurate definition than has yet been attained." I will only mention that he refers to Lorain and Robin as tracing a connection between a "white hepatization of the lungs" and pemphigus, in confirmation of my view that the lung-trouble of the preceding case was of specific origin; and I will also refer to a plate of the microscopic appearance of the lung in a case of the "so-called" white pneumonia of the newly-born, from the lungs of a child twenty-two weeks old, in Thierfelder's new atlas of pathological histology.[1] I will quote his short description, as it has not yet appeared in English: "The small air-cells are separated from each other by very broad bands of interstitial tissue, which consist, in addition to a small amount of connective tissue and a few spindle-shaped cells situated mostly very near the vessels, of irregularly-arranged masses of cells and nuclei of syphilitic neoplasm, much the same as observed in syphilitic laryngitis. This tissue is distributed in the lungs of infants either in the way of general infiltration of the septa, leaving but small air-interstices; or wedge-shaped collections are formed, generally near the pleura, embracing perhaps a lobule, which have to the naked eye the appearance of firm, bluish-red masses resembling atelectasis."

Wilson Fox states that "the clinical history of these changes is as yet almost untrodden ground;" and it is with the desire of calling attention to the subject, and of adding somewhat thereto, that these cases are detailed, in the hope that others may soon follow where either complete recovery has followed specific treatment adopted very early, or where, if fatal, the necropsies may be preceded by carefully-recorded clinical notes.

[1] "Pathолog. Histol. der Luftwege und der Lunge," Dr. Albert Thierfelder, Leipzig, 1872.

DISEASES OF THE SKIN.

BY L. DUNCAN BULKLEY, M. D.

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Seven Cases of Palmar Syphilis.—When affecting the palms of the hands and the soles of the feet alone, syphilis is so commonly mistaken for other diseases that a brief mention of seven cases which have been under treatment during the past year may not be without interest and profit. It is well known that palmar eczema and psoriasis may simulate the eruption caused by syphilis so perfectly that it is often a matter of great difficulty to make the diagnosis from the appearance of the eruption alone. Several of the cases here reported had long passed unrecognized, one of them having been twice in a hospital, for periods of three and six months respectively, without the true nature of the affection having been recognized, the treatment being purely local, and no investigation of the constitutional nature of the disease being made; and, moreover, the effects of all previous treatment had been but moderate and transitory.

The lesions of syphilis may appear upon the palms and soles either early after infection, or as one of the very late manifestations of the poison (I have observed it there as late as twenty years, as far as could be made out, after the disease had been acquired), and the cases present somewhat different appearances, according as the eruption is one of the early or late symptoms of the disease. In the earlier cases the lesions are apt to be multiple, as all the earlier manifestations of syphilis, whereas eruptions on the palm or sole late in the history

of syphilis partake more of the nature of the later lesions, and are more commonly single. These seven cases may be thus divided, and I will mention first the three in whom the palmar and plantar exhibitions of syphilis occurred early in the disease.

Case I.—Joseph Kelly, aged thirty-three, came to Demilt, February 27, 1877, saying that he had had a chancre on the penis four months previously, which was followed, at the expiration of about a month, by a general, scattered, papular eruption. Examination revealed the remains of a chancre at the end of the meatus; there was somewhat of a depression and some hardening still remaining, with moderate inguinal adenopathy.

The centres of both palms were the seats of a distinctly tubercular and squamous eruption, with well-defined margins passing abruptly from diseased to healthy tissue; the patches were about an inch and a half in diameter, and nearly circular. On the feet there was a similar eruption of flattened, scaly tubercles, disposed in a more or less circular form, about in the centre of each sole. The color of the eruption was of a dark red where the outer layers of epidermis were gone, but, where this still was intact, they had a dirty-yellow look, with punched-out edges. There had never been any moisture, and little if any itching. There was still some of the general eruption to be seen on the legs, and some superficial redness of the fauces existed.

He was put under the use of mercurial inunctions into the sides and thighs, with no local treatment, and on March 1st it was noted that there had been very great improvement in the eruption everywhere. He continued to improve, but after some weeks became careless, and returned on April 14th, after an absence of three weeks, with the eruption worse. On May 5th a sclero-choroiditis was discovered.

He continued under treatment for some weeks longer, and the eruption nearly disappeared, when he again failed to attend, and has not been seen since.

Case II.—A woman, J. H., aged forty-three, acknowledges to having had sores on the vulva in March, 1875, which were soon followed by a general eruption, the palms being affected at the same, or about the same, time. She has been in attendance at the Dispensary nearly a year; she has a family, and as soon as the hands improve to a certain point she always

neglects treatment, and returns when they give her annoyance.

In her case the eruption occupied the palms of both hands, being made up of isolated tubercles, somewhat elevated, fissured here and there with a small amount of scaling. The edges of the eruption, which were made up of separate papulo-tubercles, in some places touching each other, were sharply defined, as if punched out, and, on raising the epidermis, which was loosened from the inner border, it was seen to run externally down into healthy tissue beyond the eruption.

She was given a mixed treatment of bichloride of mercury and iodide of potash, with no local measures, and the improvement was very prompt and decided, but, like so many of these patients, attendance became irregular as the disease gave less trouble, and at the last note, May 24th, there were still some traces of the lesion, in the way of a few small fissures where former tubercles had been.

This woman has five healthy children, born before the occurrence of the chancre.

Case III.—This patient gives no history of infection, but the appearance of the eruption on the palms is that of a more recent syphiloderm, and the following history of her pregnancies confirms this. She has been married twice and had twelve children by her first husband, and none by the second; all the children came to full term except one which miscarried at three months, the cause of which she attributes to fright. All the children are healthy but one, who is under treatment for eczema of the leg.

Her name is Sarah McK., aged fifty-one years. When first seen both palms were the seat of eruptions corresponding mainly in appearance to those described in the two preceding cases. On the right palm there was a clearly-defined, irregular patch about one by one and a half inch in diameter, seated at the roots of the two middle fingers. On the palmar surface of the left hand there were three distinct patches at the roots of the last three fingers. She was given inunctions of mercurial ointment into the sides and thighs, and improvement resulted, but she also was careless, and the case was not followed to the end.

The following cases are instances of the eruption of syphilis occurring on the palm and sole later in the disease.

Case IV.—Ann McC., aged twenty-nine years, has every appearance of health, with the exception of the single lesion on the right palm, which, when she first came for treatment (October, 1876), almost incapacitated her for work; the disease occupied the larger portion of the internal surface of the hand, including the fingers and thumb. Most of this surface was bereft of epidermis, was of a deep, purplish red, the larger part of it smooth and shiny, with here and there separate or grouped tubercles, on which the new epidermis was beginning again to harden and peel; where these tubercles existed at or near flexures, there were cracks, which were very painful. The margins of the eruption were very clearly defined, punched out in appearance, with the edges of the epidermis everted, and when this was pulled on toward the healthy tissue it could not be separated without giving pain. On close examination the greater part of the margin could be recognized as composed of separate tubercles arranged side by side, in some instances running into each other, at others quite isolated.

Her history was perfectly conclusive of the nature of the disease: her first husband confessed to having syphilis, and ten years ago she became infected and had the usual phenomena, obstinate sore-throat, loss of hair, occipital headache in the afternoon, and three miscarriages at two, three, and five months respectively, followed by a dead child at full term, and two other children which lived but a few weeks, and had eruptions which, from the description, were syphilitic. The syphilitic lesion on the palm did not appear until three years before her visit to me, or *seven years* after she acquired the disease.

She was placed upon a mixed anti-syphilitic treatment, and made very great improvement without any local measures; subsequently, however, these were added to expedite the cure and to counteract the effect of her occupation. She also was rather fitful in attendance as the hand approached a cure; and at the last note, June 14th, there were still some remains of isolated tubercles, although the hand has long ceased to give her any great annoyance. She was obliged to do household work and washing most of the time while under treatment, which delayed the recovery greatly. I may mention, in this connection, that another patient treated some time ago, who was a silver-plater, and obliged to keep the hands in acid much

of the time, recovered completely and remained well of a palmar syphiloderm, he taking only the mixed treatment internally, with no local measures whatever.

Case V.—Mary D., aged sixty, a widow woman, has always enjoyed good health until a year ago, when, as she states, after smoking the pipe of a boarder, she acquired a general papular eruption, which was preceded by a sore-throat, and followed by sore eyes and falling of the hair. When first seen, June 9, 1877, the eruption was confined chiefly to the left hand, the right being entirely free. The lesion occupied an elliptical surface, extending from a little below the wrist, over the ball of the thumb, around to the roots of the fingers and along the ulnar border of the hand, joining the starting-point just above the wrist; the centre of the palm appeared free. The eruption was made up of tubercles, slightly raised above the level of the skin, which in some places touched and coalesced; there was considerable loss of the epidermal layer on the affected portions, with sharply-cut edges.

On the radial side of the left arm near the elbow, also on the right forearm, and on the back of the left hand, were the remains of a papulo-tubercular eruption, of dark-red color, and on the anterior surface of the right leg were brownish stains of a similar lesion. She was placed upon a mixed treatment with immediate improvement to the eruption, no local measures being employed.

Case VI.—James McK., aged fifty years, gives no history of contagion, the first lesion of syphilis which he acknowledges to being the present eruption, which he says came first a year and a half ago; the palmar lesion appeared to be but a portion of the papulo-tubercular eruption existing elsewhere. On the upper surface of the right foot, extending around on to the tendo Achillis, also on both legs, and to moderate extent on the arms, there was an eruption disposed to a great extent in the form of circles and gyrations, composed of flat papulo-tubercles, in many instances touching each other, in others isolated, of a deep, coppery-red color, and with but moderate scaling. On the right palm was an eruption composed of the same elements, and exhibiting characteristics corresponding to those previously detailed, which need not be repeated, as the lesion presented nothing unusual. He was seen but once.

Case VII.—James Higgins, aged forty-two, a laborer, ap-

peared at the Dispensary first on January 27, 1877, for the treatment of an affection of the sole of the foot, which had lasted a year and a half. He is a man of more than ordinary intelligence for his class and occupation, and denied having had syphilis, and was much surprised when the disease was confidently ascribed to this cause; he gave no history of syphilis as far as could be made out.

On the middle of the sole of the right foot there existed an irregularly-shaped patch, with circular edges, of diseased tissue, from which most of the normal epidermal covering was gone. On close examination it was seen to be composed mainly of separate elements, irregularly placed, which presented themselves as papular or small tubercular prominences, with a dirty-grayish epidermal covering. The margins of the patch were very clearly defined and sharply cut, the epidermis standing up at the edge, and when pulled on the layer was found to reach down into healthy tissue peripherally.

For the purpose of clinical study, the case being carefully watched by a number of medical gentlemen attending the clinic, he was given only mercurial ointment, for inunction into the sides and thighs, with no local application whatever. The patch fairly melted away under the anti-syphilitic treatment; in one week, on February 3d, it was recorded that there was great improvement; on March 3d it was noted that the eruption was nearly gone; and on March 13th, or six weeks from the first visit, the record reads that there was only staining left; the patch had existed one and a half year previously.

Remarks.—There are many points of interest in these cases which can hardly be touched upon in the present limits. The eruptions all presented much the same character, except that, in the cases in which the lesion occurred earlier in the disease, there was generally a multiplicity of affected points, while after the lapse of a few years the poison showed itself, as is so commonly the case, at single portions at a time.

The eruptions all possessed points which should, to one familiar with the subject, distinguish them very clearly, and certainly from eczema and psoriasis, the only two affections with which they could possibly be confounded. The history of the case is, of course, often of great service, but not infre-

quently, as in Case VII. especially (and often it has occurred in private practice), no sufficient confirmation is obtained from this source, and we must depend solely on the clinical features.

From *eczema*, then, the eruption would be differentiated by the absence of all thickening and itching, also of moisture, which, although uncommon in eczema of the palm, does sometimes occur. Moreover, somewhere around a patch of eczema of the palm, you will find papules, or deep vesicles, or the remains of them, whereas here, whenever the elementary lesion was discoverable, it was a larger papulo-tubercle, of a dark-red color. The margins of eczematous patches are never so clearly and sharply cut as in the syphiloderm, it being a clinical feature of all eczemas that the border between healthy and diseased tissue is never accurately determinable. The surface of the eruption differs materially from that exhibited in eczema; in the latter there are far more apt to be painful fissures of some size, with thickened edges; here they are rare; in eczema the epidermal layers are more adherent than here, where they fall very shortly after they have been undermined by the syphilitic new deposit. The syphilitic lesion is very apt to heal in the centre, while the reddened, slightly-raised border, with its sharp-cut, outer epidermal edge, advances peripherally; in eczema the borders generally get well first.

From true *psoriasis palmaris* this lesion has points of difference, which, although less definite than those separating the scaly syphiloderm and eczema, are nevertheless worthy of bearing in mind, and of clinical value. It will be noticed that I apply the term scaly syphiloderm to the syphilitic lesion under consideration, speaking of psoriasis palmaris as a distinct and separate disease. This position is a very important one for all to take who seek accuracy in medicine, namely, not to use the name of one disease adjectively to qualify another with which it has no possible relations; it is a great nosological error in medicine to speak of syphilitic lupus, acne, eczema, psoriasis, etc., simply because the particular lesion of syphilis is supposed to resemble these diseases.

Psoriasis palmaris then, first, is a very rare disease; but very few cases have ever presented themselves to my observation; some authors claim that it never occurs separated from psoriasis of the rest of the body: if this latter is true, which I am almost inclined to believe, we have at once a very valu-

able diagnostic mark. Moreover, when psoriasis appears on the palms and soles it assumes more the appearances presented on the rest of the body, modified, of course, by the very thick, dense, and tough epidermal covering peculiar to the situations. It generally shows several moderately small circular patches, which increase in size by extending each one peripherally, and not by the accession of new separate tubercles added externally, as in the lesion of syphilis. The epidermis over true psoriatic patches in these situations generally adheres pretty firmly, and when removed the base is not elevated as in the syphiloderm, but there is rather a depression —that is, the condition is dependent directly upon the pathological condition causing it; in syphilis the new formation leads to the death of the superjacent epidermis, while in psoriasis there is no new formation, but simply the enlarged and lengthened papillæ and the vascular dilatation, and the epidermis appears simply to be imperfectly formed, and consequently to be shed. The lesions in psoriasis palmaris are multiple as a rule, that is, several small patches on each hand; whereas syphilis in its later stages almost always affects but one spot, and when in its earlier periods both palms or soles are affected the lesion is generally larger and not multiple. Palmar psoriasis not infrequently itches.

In regard to the treatment of these cases, local measures undoubtedly do considerable good in certain of them, and in Case IV. materially assisted the cure. These patients were, however, generally given constitutional remedies alone, that those attending the clinic might observe the results, and also because it was believed to be most advantageous to the patient to attack the disease proper, especially because, as soon as local benefit was obtained, they were always ready to neglect the internal measures. In Case VII., where the single lesion on one sole disappeared very rapidly and perfectly under mercurial inunctions to the side alone, is shown the complete control which mercury has over the disease. Where the eruption existed on the palm, and mercurial frictions were made by the patients themselves, we have, of course, the combined effect of the local and constitutional effect of the mercury. The oleate of mercury, well rubbed into the palms, is an efficient remedy which I have used, but not in any of the cases here recorded.

ON

DIET AND HYGIENE

IN

DISEASES OF THE SKIN,

BY

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ON

DIET AND HYGIENE

IN

DISEASES OF THE SKIN.

To those who look upon diseases of the skin as entirely separated from those of the general economy, and consider only the local lesions and their local pathology, regarding the skin as idiopathically affected, mainly, if not entirely, by external causes, the subject of diet and hygiene in these diseases has little of interest. But to those who take a broader view of cutaneous physiology and pathology, and remember that the skin is but part of the general economy, subject to changes in disease, quite similar to those affecting the rest of the body, and further, that it is in active sympathy with the general system, and also that its diseases are subject to like causes as those of any other organ, the subject of diet and hygiene in affections of the skin is one of very great and practical interest.

The question is continually asked the physician whether it makes any difference what the patient eats or drinks who is affected with this or that skin disease, and the opinions given

are often as numerous as the physicians giving them, and are not infrequently quite contradictory; many are based on theory, many on popular opinion, which has sanctioned this and decried that article of food or drink, and seldom can a good reason be given for the rules prescribed. Much the same may be said of hygiene, to which, indeed, far too little attention is paid by the physician. The object of the present paper is to endeavor to direct thought to the subject, to give the basis upon which rules may be established, and to communicate in brief what clinical experience has taught me to be of importance in regard to diet and hygiene in daily dealing with diseases of the skin. First, of diet:

Dieting, to the popular mind, represents a starvation process, which is to be continued for a longer or shorter time with the view, as it were, of starving out a disease; the definition in Webster of the verb diet, is "to eat and drink sparingly or by prescribed rules." In the present paper the word diet has a broader meaning and signifies such a regulation of the quantity and quality of the food and drink taken, its mode of preparation, and time and method of consumption, as shall conduce to the restoration and maintenance of health. Under hygiene I include all other elements of daily life affecting the health and well being of the patient—exercise, bathing, mode of life, habitation, hours of work, sleep, etc.

That articles of diet have a direct effect upon the skin for good or evil, I think there can be no doubt in the minds of those who have given any thought to the subject. All are more or less familiar with the acute erythema or urticaria resulting in some persons from the ingestion of certain forms of fish, particularly shell fish; also occasionally from strawberries, bananas, etc. Some individuals are so constituted that whenever these are partaken of, the eruption will appear, while many others are thus affected only when the articles are stale, or when they, themselves, are in a peculiarly susceptible condition. It is also well known that buckwheat calls forth a pustular eruption, an acne in some persons, and the crops of acne which follow gross indiscretions in diet, as the partaking largely of fruit cake, mince pie, sausages, cheese, nuts, etc., are of daily observation on all sides. We also re-

call the eruptions produced by the internal administration of some articles which are used as drugs, copaiba, belladonna, quinia, iodide and bromide of potassium, etc. The skin lesions occasioned by all of these are transitory affairs, very evidently dependent upon the causes mentioned, disappearing, as a rule, spontaneously when the cause ceases to act.

Now, just as these acute disorders of the skin are produced by acutely acting dietary causes, so a chronic error in diet can and often does induce or at least keep up a more chronic cutaneous lesion, which of necessity will return as often as a conjunction of causes acts with sufficient force.

The most evident and well recognized association of dietary error and a chronic lesion of the skin is in the case of scorbutus, where the hæmorrhagic tendency in the tissue of the skin and other organs is plainly due to a deficiency in the vegetable portion of the diet. Again, purpura hæmorrhagica has been ascribed, with some probability, to the excessive habitual use of water.* A but little recognized, although important alimentary cause of skin lesions is the use of alcohol, which has been shown by Renault† to be a most powerful cause of the appearance of the late cutaneous manifestations of syphilis, as well as of other affections of the skin.

Recognizing, then, that ingesta may have very definite powers in calling forth eruptions on the skin, let us consider for a moment in what manner they act. First, they may have a direct irritating action on the stomach intestines, giving rise to reflex cutaneous irritation, resulting in erythema and urticaria, as in the eruptions from shell fish, strawberries, etc., which eruptions sometimes vanish very promptly when the offending mass is rejected from the stomach, or removed by purgation; second, they may act directly upon the skin tissues, as is sometimes the case when ergoted rye is eaten, causing certain skin lesions; alcohol, also the bromides and iodides probably act in this manner; third, articles of diet may produce indigestion, giving rise to the products of imperfectly elaborated material, having direct irritating effect

*Charles Hooker, Report on the Diet of the Sick. *Transactions Amer. Med. Association*, 1853.

†Essai sur l'influence de l'alcolism, etc. Thèse. de Paris, 1874.

in its circulation through the capillaries, as in the acne following buckwheat, cheese, sweets, etc., where, if they are taken in moderate quantity, no ill result may follow, but over-indulgence, followed by acidity, gives rise to the eruptions; fourth, the error in diet may consist in the absence of certain elements of food, as in the case of scorbutus, and also in strumous eczema, in which latter, a supply of fatty matter will often alone restore the healthy condition.

Now, I believe that in many diseases of the skin the character of the diet employed acts in one or the other of these ways, and that it is not an unimportant matter as to what food and drink the patients take, but that these affections are ofttimes very much influenced for good or for evil by the quality and quantity of aliment taken, its mode of preparation, and time and method of consuming. But little is found in the works on dermatology on the subject of diet in diseases of the skin, so that I shall not attempt to quote authorities, but shall only give suggestions as they have developed themselves in my own experience and study.

Beginning, then, with eczema, that "keystone in dermatology," as it has been termed, I will first call attention to the errors in diet which I constantly observe in those suffering from it during infant life. In infants at the breast, too frequent feeding is, I believe, a frequent source of this and other diseases; especially is it common for the mother to give the child the breast every time it cries, or is restless with the itching, which generally but aggravates the already existing digestive disorder; the time of feeding should be regulated, and the breast given not oftener than every two hours. But, again, the times of feeding may be correct, and the error may be in the quality of the milk from a faulty diet in the mother. In my inquiries, I have very generally found that mothers with eczematous children at the breast are in the habit of taking daily a larger or smaller amount of ale, beer, porter, and sometimes wine, or else large amounts of tea. Dyspepsia in the mother will very often cause eczema in her nursing child, and not infrequently rich chocolate, taken to "make milk," will disagree with the mother, and by means of her indigestion, influence badly the eczema in the child. I much

prefer milk or oat meal or other gruel for this purpose. Prolonged lactation is sometimes a cause, or at least, an impediment to the cure, of eczema; when the milk is poor in the mother, it is best to supplement it with cod liver oil, which even the smallest children often take with great avidity. Some of my best results in eczema in children have been in those in whom this nutrient medicine seemed indicated.

When the child with eczema passes beyond the nourishment of the breast, great care is required that its diet be correct. I need hardly allude to the impropriety of giving young children "a little of all that's going," as I see done every day among the poor, but unless the matter of the diet is inquired into, it will frequently be found that even children at the breast are fed from the table with the food of adults; especially do they often get a little tea or coffee, of which children are universally fond; these should, of course, be interdicted to all children, and they should be encouraged to use milk freely.

It is an error to believe that a child suffering from eczema is benefited by the administration of a large amount of nitrogenous nourishment or stimulants; the processes of assimilation are commonly at fault, and an excess of highly nitrogenized food but clogs the already overburdened kidneys, whose function it is to eliminate a large share of these elements. Recently, an infant, but a few months old, was brought to my office from Jersey City, dying, as I believe, from overfeeding, especially in this line. The physician who had previously seen the case, had advised large amounts of the juice of meat, repeatedly during the day, together with brandy, etc.; the child was laboring for breath, pulse full and throbbing, without any acute disease of the lungs or other organs, nor any disease save an eczema of moderate extent. The little patient died that night before any relief could be obtained, killed, as I truly believe, by the large amounts of nitrogenous elements which had been forced into its circulation. A moderate amount of beef juice, one or two teaspoonfuls, *once* daily, to a child of one or two years of age, is all that can be properly cared for, and in the majority of these cases, cod liver oil is far more serviceable.

It is also a constant error in the diet of these little patients with eczema to overload the stomach with pure starch compounds. Most of the children whom I am called on to treat with this eruption, are receiving large amounts of corn starch, barley, etc., in place of the milk which is their proper nourishment; the diet of these I usually change to wheat preparations, especially such as contain the whole wheat, and to such articles as Nestle's food.

These errors of diet are observed, undoubtedly, in a more glaring manner among the lower classes than among the more intelligent, and I think I may safely say that in hardly a single instance among my dispensary patients, during the past year, was the diet such as the most enlightened judgment would indicate that it should be for the age of the patient. Candy, cake, etc., of the most indigestible kinds, were constantly found in childrens' hands and mouths, and even cheese was occasionally taken from them. The diet of children with eczema should always be of the most nourishing kind, properly cooked, and taken at regular times, with little if anything between meals. I know of no restrictions other than such as are indicated by ordinary, good medical judgment. But it is a mistake to suppose that these things will take care of themselves; special inquiry must be made, special rules laid down, and hurtful articles interdicted.

Coming now to eczema in older life, the disease is undoubtedly one of debility, as is all disease, one of lowered vitality, and it will often be difficult to raise the vitality to the standard of health. But here, again, mistakes are very commonly made, for it is wrong to suppose that this can be done simply by increasing the quantity of the food taken, even in the line of nutritious elements; for digestion and assimilation are constantly at fault in eczema, and these require to be remedied first; ashes and cinders need to be removed before fresh and good coal can properly undergo combustion. It is far more important, therefore, that the food taken be properly and thoroughly appropriated to the system, than that organs already but partially fulfilling their functions should be taxed with new material. Therefore, in the earlier stages of more acute and severe eczema, the total amount of food may, with

advantage, be lessened, until the liberated organs regain a normal power, assisted by proper medication. These seem very homely matters to speak of before a learned body, but I have so very frequently seen patients crowded with food, beef juice, cod liver oil and stimulants, when the tongue was coated, the urine loaded, the secretion from the bowels scanty, and the skin dry and harsh, that I cannot forbear mentioning how frequently personal attention to those matters has afforded the greatest relief to the patient's feelings, as well as to the eczema or other cutaneous ailment. I am aware of the claims so ably advocated by Dr. Weir Mitchell, in regard to very great feeding, even over-feeding, in cases of greatly depressed vitality; but to have his method successful, it needs to be followed accurately in all its details, with the massage, electricity, rest, etc., and he admits that even then, all cases are not suitable for it; and, moreover, he distinctly says that he watches the urine* for signs of improper assimilation, and he is constantly on the alert, as a most intelligent physician, for signs of dyspepsia, etc. Moreover, I do not know that this process of excessive feeding and rest has ever been successfully tried in cases of eczema, or in any skin diseases.

I do not believe it best to cut off all meat in eczema and psoriasis, as some have recommended to do; I consider that in this country, at least, a fair amount of meat, once, or at the most, twice daily, is conducive to health, and is of benefit in eczema, acne and even psoriasis; this should be well cooked, but not overdone, and fried or boiled meat should be avoided.

It will be constantly observed, that patients, with certain diseases of the skin, as eczema, psoriasis and acne, avoid fat, this is especially true of those with the strumous or gouty habit well marked, and to insure a cure of the skin lesion and subsequent freedom from it, it will be necessary to see to it that this fault in the diet is corrected; at first this is difficult to accomplish, but it can be done in almost every instance, and I have frequently seen those who exhibited a repugnance to fat meat, become educated really to crave it.

*Fat and Blood and how to make them. Philadelphia, 1877, p. 81.

These patients may be encouraged to eat butter in abundance, not melted or fried with other substances, but fresh on bread, etc.; cream is also to be employed when possible, and cod liver oil or glycerin will often be required to supply a deficiency otherwise unreached.

But in order to properly care for and assimilate this fatty food, it will often be necessary to increase the amount of oxygen inspired, and to accomplish this exercise in the open air must be insisted on. Diet and hygiene are, therefore, closely associated in the treatment of many diseases of the skin.

Perhaps the greatest error of diet, which is constantly committed by patients affected with cutaneous diseases, is in the too great use of sweet and starchy food. The appetite of many patients with skin diseases is faulty, and as there is little relish for ordinary food, the deficiency is made up by those articles which appeal more strongly to the taste; or with many there is the great fault of over-eating, especially in the line of sweet and starchy food, as obtained in desserts. Among those who are better to do, eating is so much of a social habit that the discrimination is seldom made between appetite and taste, and many continue to eat after a healthy appetite has been satisfied, and this additional sweet and starchy dessert, often in a very indigestible combination, is just so much of an extra tax upon the organs which minister to nutrition.

Therefore, as a rule, I inquire into these matters of diet, in patients with eczema and other skin diseases, and continually find the habitual use of articles which the patients themselves recognize to be injurious, but from which they have not the moral courage to abstain until so directed by the physician. Such are rich salads and side dishes, pickles, gravies, dressing of fowls, nuts, cheese, ice cream after dinner, etc.

Coffee and tea I do *not* consider harmful if taken in moderate and proper quantities, and at proper times; but this is a matter which requires attention, for some of the worst cases of eczema which I have ever been called on to treat, have been in those who consumed inordinate amounts of tea, taking it many times a day. I allow a cup of coffee and

milk in the morning, and one of tea at noon or night if desired, but not both; nor is it desirable to take the tea at night if a hearty dinner is eaten then. I never allow coffee to be drank after dinner by these patients.

In regard to the use of wines, ales, liquors, etc., I am very decided in the directions I give to patients with diseases of the skin—that is, each case is different, and should be prescribed for according to the indications present. The habitual use of any of them I consider to be prejudicial to at least nine out of ten of the cases which come under my care (which is synonymous with those affected with diseases of the skin), and I cut them off far, far oftener than I order them for those unaccustomed to their use; this is not, however, to be blindly done in every case, especially in those more or less dependent upon them, and occasionally they may serve a good service in treating skin cases, but these instances are few.

I do not, therefore, allow patients with syphilis in any of its stages to use any form of fermented or distilled liquors, believing with Renault that alcohol makes all these lesions worse, and predisposes the patient to the more severe ulcerative forms. I may here add a word or two in reference to other elements of diet and hygiene in syphilis. There is great danger, I find, of regarding syphilis simply as a series of lesions all due to the action of the specific poison, without remembering that many other elements are to be taken into consideration in each particular case. Ofttimes mercury and iodide of potassium seem to have almost no control over the lesions, or even to do harm; in many cases I find other causes, such as dietary and hygienic acting with great power, and hindering the cure. I therefore urge that very much in this paper pertains to syphilitic patients as well as to those with acne, eczema, psoriasis, etc.

I generally withhold fermented and distilled liquors also from eczema patients, preferring, if the appetite and strength require it, to stimulate with the compound tincture or extract of bark, with nux vomica or strychnine, and quinia, or the mineral acids and iron.

In acne, I very seldom, if ever, allow my patients any

spirituous or fermented drinks, and interdict especially ale, porter, sweet wines, cider, etc. One of the most obstinate cases of acne rosacea which I have ever had to manage was in the person of an elderly gentleman, who persisted, for a time, in drinking wine, mainly sherry and claret; after a while he was persuaded to desist from them, when his skin lesion yielded promptly to remedies which before were inefficacious, and his face has now remained free from eruption for a number of years. Another patient, a lady, with a very severe and disfiguring eruption of acne indurata, had been advised cod liver oil, which she took with ale three times daily, with a constant increase in the eruption; subsequently cod liver oil without the ale was well borne and the patient recovered.

The same reasons which lead me to keep these substances from acne patients cause me to endeavor to hinder patients with psoriasis from their habitual, much more from their excessive, use—namely, patients with both these affections all acknowledge that there is more or less flushing of the cutaneous surface following their use, and ofttimes a period of subsequent depression and drowsiness. Now, these are both marks of errors of digestion or assimilation, and as such should be avoided; moreover, the larger share of patients notice that an excessive use of fermented liquors is always followed by an increase in the eruption. Of this I have had some striking examples, and Renault, in the thesis before alluded to, cites a number of cases which show that alcohol causes a greater development of the disease, and more active phenomena of itching, etc. Renault shows that the physiological action of alcohol is such as to predispose, more or less, to cutaneous diseases. 1. Because it is eliminated to the skin. 2. Because a small dose produces a general nervous excitation, and a large dose depression. 3. Because of its diminishing the amount of carbonic acid exhaled and lowering the temperature; and, 4. Because of its tendency to produce fatty changes in the tissues. He gives a case of hydroa where bullæ had developed twenty times within seven years, each attack almost always succeeding alcoholic abuse.

Soup is an article of diet in very common use, and requires

consideration. Many of my patients with acne and other skin diseases say that the face is always much more flushed after taking soup, and quite a proportion of them have themselves learned to avoid it. I almost always interdict its use in acne, and frequently in other affections of the skin.

It is popularly supposed, and believed by many physicians that fish is injurious and should be restricted in skin diseases; this is founded upon the fact before alluded to, that in certain individuals some varieties of fish, especially shell-fish, call forth an eruption of erythema or urticaria. I have not found fish to be injurious in such affections as acne, eczema and psoriasis; indeed, unless there is some peculiar idiosyncrasy against fish, I constantly order it as an article of diet to take the place of meat in those to whom this restriction is required.

It would take much more time than I intend to occupy even to briefly allude to many articles of diet which have more or less effect upon certain of this class of diseases, and to give the reasons therefor, and in closing this portion of my subject I can but remind you of the principles which are to guide one in giving directions about diet.

Indigestion must be *looked for*, and in some of its forms it will be found to be very commonly present. I need hardly remind this audience that indigestion, or, more properly, imperfect digestion, embraces a much larger field of sytemic derangement than is often recognized as such, and has to do with the entire processes of assimilation and disintegration. That is, there may be none of the ordinary signs of stomach disorder, such as pain in the epigastrium, flatulence, acid eructations, etc., and yet there may be very serious failure in the process of converting food into tissue and energy, and of removing the effete products of the same. Of these I cannot now particularly speak, having recently developed the subject elsewhere very fully,* but I wish to insist that every article of food which may disturb these processes must be avoided in these diseases, and to accomplish this much care will often be required; and I wish to impress the fact that

*On the Recognition and Management of the Gouty State in Diseases of the Skin. Read before the American Medical Association, June 7, 1877. *American Practitioner*, November, 1877.—Reprint, G. P. Putnam's Sons, New York, N. Y.

these dietary errors are far more common than they are thought to be, and are far more productive of skin lesions than is commonly acknowledged.

In regard to the other side of the question, it is often of *importance to add to the diet as usually taken, in certain diseases of the skin.* I have already alluded to the subject of *the use of fatty matter,* especially the fat of roast beef and *mutton, and of chops* and steaks, and also to the necessity, *ofttimes of* supplementing these with cod liver oil or glycerin *in strumous* and gouty subjects. Indeed it is unwise to cut off largely the carbonaceous elements, as is done when we limit the starch and sugar, without supplying its place by a sufficient quantity of the same in some more digestible form.

Some care is required in executing this order "to use fat largely" by those unaccustomed to it, because there is danger of the production of the state or group of symptoms commonly known as "bilious," as is very frequently seen in those who begin cod liver oil in too large a dose. Alkalies can often be given with much advantage to counteract this, and when I order milk for adults, as I do a great deal, I often direct a little acetate of potassa, fifteen to twenty grains, or ten to twenty drops of liquor potassæ, to be taken in each tumblerful. I regret that I have no experience which I am able to record of the use of the malt extracts in skin diseases; they are frequently prescribed in these affections, but I am unable to give any particular indications for their use, other than those suggested by a run-down condition of the patient. I have had some very good results with glycerin internally in papular and punctate acne.

There is another addition to the diet of very many patients affected with skin disease, especially acne, eczema and psoriasis, which I consider to be very important; and that is found in the truly nutritive portion of wheat which is so commonly taken out and thrown away. I allude to the use of preparations containing the whole of the wheat kernel,* and of these there is none, in my estimation, equal to

*The ordinary Graham flour does not fulfill all the requirements, because in the early siftings to remove the coarser portions of the silex coat, much of the gluten and phosphates are also taken away, adhering to the former; moreover, this is not always well borne, because the portions of unground wheat irritate the stomach and intestines.

what is known as the cold-blast attrition flour of whole wheat. In this the hard, silex coat is first removed and comes off alone, leaving all the nutritive elements which are then ground into a fine flour; this contains all the phosphates as well as all the gluten of the wheat, and is, I believe, many times as nutritious as the ordinary very fine white flour, as commonly used. The bread made from it is quite dark, but is very palatable, and every one of the many who are now using it at my direction is fond of it, especially children. I invariably place patients upon it who have any failure in the nutrition of the hair, and I believe that it has assisted me much in the treatment of these cases. I use this also with good results in all patients where any nervous phenomena exhibit themselves, and in those who are of constipated habit; sometimes it alone suffices to restore regularity of action to the bowels. I have employed it for about two years, and order it on general principles to the children under my care, because I believe that it best represents the food which nature designed should be prepared from the whole wheat kernel.*

I also encourage largely the use of crushed wheat for breakfast for the same reasons, preferring it in the main to oat meal in skin diseases. My impression is that there is some truth in the popular opinion that oat meal is rather "heating," although I cannot well define exactly what is meant by the latter term; it does, however, act unfavorably in some cases of acne and eczema. Both cracked wheat and oat meal should be much more thorougly boiled than is commonly done; it is well to boil them over night, and again in the morning.

Time and space forbid my entering at all fully into the other elements of diet, as indicated in my definition of it—namely, the regulation of the quantity of food and drink taken, its mode of preparation, and time, and method of consumption;

*The flour that I have reference to is quite different from the ordinary Graham flour; the agents for it in New York are the Health Food Company, 76 Fourth Avenue. I give the name and address because it is essential, I think, to get just the right article, and, as far as I can learn, after considerable inquiry, there is no other preparation which answers the same end, for the reasons stated in the paper. It is not an advertised nostrum, but simply wheat ground in a particular manner; nothing more, nothing less.

but I would like to throw out a few practical thoughts which are matters of every day consideration in my office. I have already spoken somewhat of the quantity; this must neither be too small nor too large; a *healthy* appetite and *good* judgment are the best guides, but unfortunately every one does not possess one or both of these, and the physician should endeavor to supply the lack; over-eating I consider the fault in by far the larger proportion of cases.

A large field of thought is open in regard to the mode of preparation of foods, in regard to which the greatest ignorance exists, but which we cannot at all enter upon at present; suffice to say, patients with skin lesions should not take their food fried, nor too well cooked in any way; high seasoning I decidedly object to for these patients.

The time of taking food is by no means an unimportant matter, and regularity of meals is very necessary both to the restoration to health of diseased tissues, and to the maintenance of the same, and yet I continually find very grave errors committed by very intelligent persons; this is a matter I very frequently speak of.

It may seem trivial to speak of the method of consuming food, but unless this is attended to by the physician a very common error may be persisted in, which may baffle many good efforts in other directions. I allude to the very common American habit of eating fast, and of imperfectly masticating the food. The process of digestion undoubtedly commences in the mouth, and an imperfect performance of the work allotted to this portion of the digestive tract must throw extra work on other portions, and results in imperfect digestion. I continually am obliged to caution skin patients in regard to this.

Many inadvertently take large amounts of water or other liquid with their meals. Very cold water is especially bad, but any fluid beyond a very moderate amount certainly dilutes the gastric juice, and impairs digestion. Nor is it well to take the tumblerful, as many do, just at the close of the meal; the result is the same; water or fluid taken too soon afterwards must and does also act prejudicially. A common direction of mine is to diminish the quantity of fluid taken

at the meal by one-half—one cup of tea where too were taken; half a goblet of water where one was drunk.

Some of these suggestions may seem useless to my hearers, but I am assured of the truth and importance of all the matters I have mentioned, from a not inconsiderable practice among those who are habitually suffering from some of the elements of imperfect digestion and the skin diseases dependent thereon, all of which ofttimes result from dietary errors as understood in my definition.

There are, of course, other causes of these difficulties, which belong rather to the subject of hygiene, such as mental strain, worry, etc.; but those I have mentioned are so easily remedied that I cannot but endeavor to impress upon you the importance of attending to them, believing that if it is habitually done, it will be much easier to remove many diseases of the skin. It must be remembered that in a chronic state we must use chronic remedies, and also that the diet is a chronic factor for good or for evil long after the patient has ceased to use our external or internal remedies.

I have already consumed so much of your time that I shall have to be very brief in regard to the subject of hygiene in cutaneous maladies; and the most I can do on the present occasion is to impress the fact that every element which can conduce to the general health and vigor of the patient should be considered in connection with those afflicted with diseases of the skin.

First in importance I place exercise. And explicit instructions should be given to every one in regard to this; for the judgment of few patients will lead them to employ this agent properly or sufficiently. No spasmodic or irregular exercise will suffice; but steady, daily action of the whole frame can and certainly does conduce to the restoration to health of diseased skin.

Bathing ranks next in importance, and the daily cold or tepid sponge bath on rising, with good, earnest friction thereafter, is a common prescription of mine to those who can bear it. If this cannot be done, mildly alkaline warm baths twice or thrice weekly, at night, conduce much to the perfect

interchange of tissue elements, and often help a purely localized skin disease amazingly.

Proper rest and sleep should never be neglected by the physician; for some patients are always in such a tearing hurry that their systems never recover from the shock of one day before the next is upon them; mental anxiety and nervous over-strain are undoubtedly the causes of the beginning and continuance of many skin diseases. Ventilation and sunlight are indispensable agents to recovery, and should not escape the careful physician's attention.

Finally, no item which can conduce to the physical welfare of a patient is beneath the notice of the medical man who would successfully treat diseases of the skin. Diet and hygiene represent a large share of the elements of human existence, and are often, or, rather, always, more potent for health or ill-health than what are more commonly known of medicines; and what is true of the general economy is eminently true in regard to one of the most important emunctories of the body, namely, the skin.

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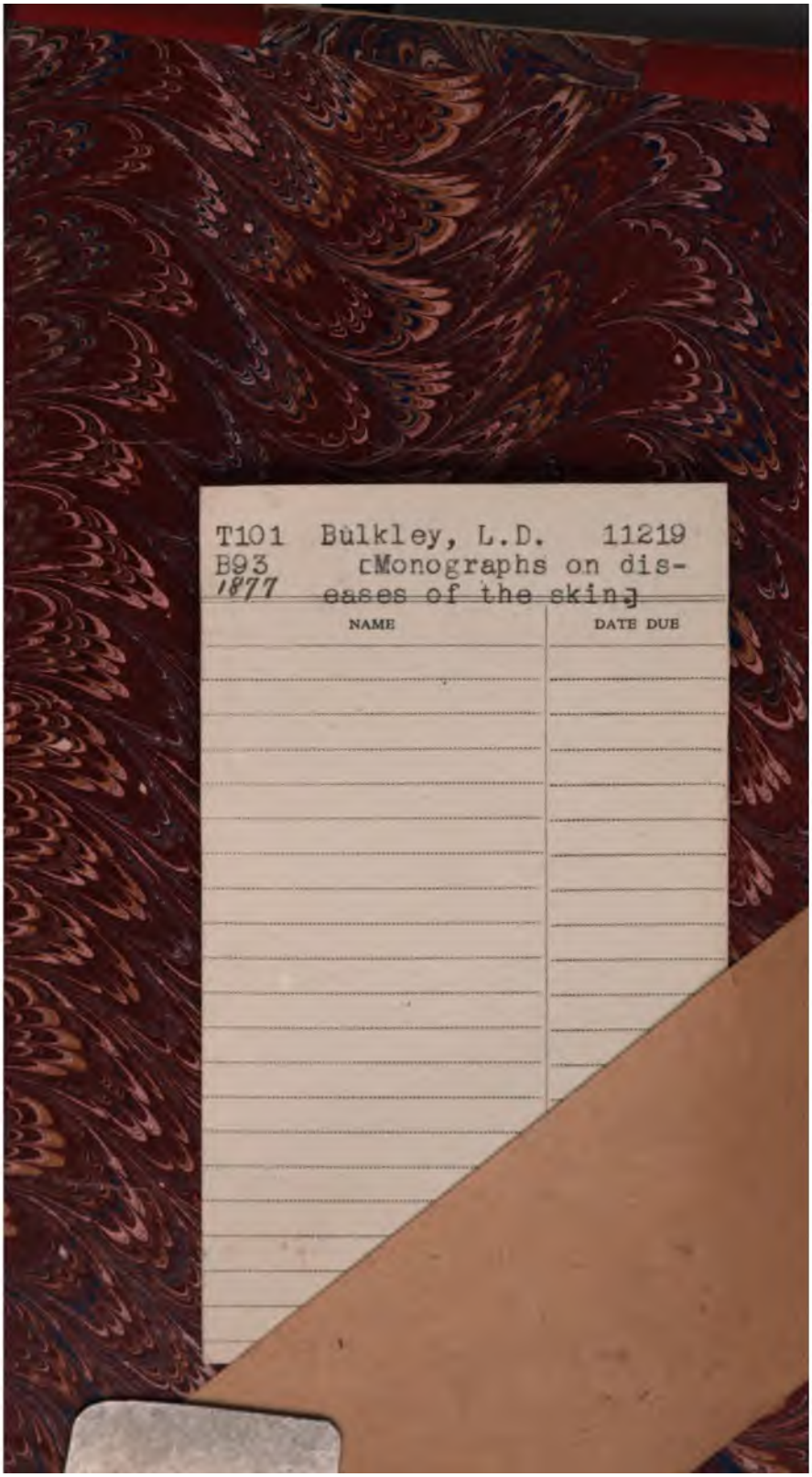
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